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THE MANAGEMENT
OF
LABOR RELATIONS

BY

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TO

A. D. W.

AND

B. J. D.

PREFACE

Many developments have taken place since the publication of *Labor Management* by Gordon S. Watkins in 1928. This is strikingly true of American economic life and particularly of labor relations. The past decade has witnessed significant changes which already have had a marked effect upon points of view, attitudes, and practices in the field of personnel administration. The unprecedented growth of American unionism with the consequent expansion of collective bargaining, the appearance of an increasingly militant leadership in the American labor movement, the extension of progressive social legislation, the active interest of political leaders in the improvement of standards of employment, and the accumulation of authoritative data through research in the field of industrial relations have resulted in the development of new techniques to aid in the solution of old and new problems.

The net result of what has just been said is that no book on labor relations written a decade ago is adequate either for classroom instruction or as a reliable guide to personnel executives in dealing with new problems and situations which have emerged in the interim. For all practical purposes, therefore, the present volume is a new book even though it was undertaken originally as a revision of *Labor Management.* Every effort has been made to incorporate the latest available information on significant changes in industrial relations and the techniques that have proved effective in meeting such changes. Both the results of special research and the practical experience of American industry, business, and government have been drawn upon generously to give concreteness to the problems discussed and the methods of procedure adopted to deal with them. The influence of the rapid expansion of unionization and of progressive social legislation upon labor relations is definitely recognized, and the possible consequences of further changes are discussed. To simplify and clarify the analysis of the numerous problems and techniques, statistical data, charts, graphs, and forms have been scattered throughout the text. A comprehensive selected list of references has been included in order to aid students, personnel executives, and general readers who may wish to make a more intensive study of particular problems.

The authors have drawn freely and widely upon the research and experience of special students and numerous corporations. It would be impossible here to acknowledge their debt of gratitude to all of these individually. Wherever possible, their assistance is acknowledged in the body of the text and in the footnotes.

In conducting the research necessary for the completion of their task, the authors have received excellent assistance from Miss Frances M. Fearing. Anna Davis Watkins and Bonnie Jennings Dodd have read the manuscript and the proof. Their encouragement and criticism have been invaluable.

GORDON S. WATKINS,
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August, 1938.

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PART I

THE NATURE AND DEVELOPMENT OF PERSONNEL MANAGEMENT

CHAPTER I

THE NATURE OF PERSONNEL PROBLEMS

Conflict in Employment Relations.—The phrase "personnel problems" immediately suggests the fundamental nature of the difficulties with which our study deals, namely, points of conflict in the relations between employers and employees. Maladjustments are constantly present in the relations of workers to their particular jobs, their fellow workers, or the employment conditions in general. The cumulative effect of such maladjustments is invariably reflected in the loss of good will between management and men, which in turn yields such undesirable results as diminished efficiency and increased unrest among the working force.

These conflicts in employment relations are commonly designated by the comprehensive term "industrial unrest." Such unrest is admittedly one of the major problems of modern industry and business. Indeed, conflict in employment relations has become so pronounced in advanced industrial countries such as the United States and Great Britain as to constitute a source of great anxiety for those who are entrusted with the responsibility for the orderly functioning of our economic organization. At frequent intervals, the struggle between capital and labor is so acute as to threaten the security and permanence of the social order.

Troubles within the industrial family may be viewed more or less philosophically as the "growing pains of an industrial system in transition," or idealistically as the "birth pangs of a new society"; hence, to be accepted with fatalistic indifference. This means that nothing can or should be done about them. On the other hand, they may be interpreted as an unmistakable symptom of unremedied pathological conditions in the organization and operation of particular industrial and business establishments. That is, we may look upon industrial discontent and the individual problems of personnel which constitute it as diseases, the causes of which need to be diagnosed in order that appropriate and effective remedies may be found and applied. The task of making the diagnosis and providing workable solutions is the major function of personnel management.

However much partisan or even disinterested students of labor problems may differ in their analyses of the conflicts between management and men or in their attitudes toward the necessity for an immediate solution, the reality of the phenomenon as an economic and social problem is undeniable. Indeed, the currents of social progress are constantly diverted from their normal channels by the crosscurrent of industrial strife. At not infrequent intervals it is practically impossible for the community to steer its way through the rapids of industrial crises, and employers are compelled either to operate their establishments at reduced capacity or to keep them completely idle. Cordial employment relations cultivated through years of industrial peace are abruptly, sometimes thoughtlessly and unjustifiably, destroyed by recurring epidemics of strikes, lockouts, and other forms of industrial warfare. The flow of economic goods and services is arrested because the normal activities of industry and trade are interrupted.

The serious consequences of conflicts in industry are, of course, not confined to the immediate financial losses of the disputants. Innumerable persons who are in no way responsible for the grievances suffer serious inconvenience and hardship. Moreover, as the general strike with its revolutionary purposes and methods has taken its place among the weapons of organized labor and employers have perfected unprecedented solidarity in opposing the demands of unionized employees, strife is intensified and prolonged. The growing interdependence of the constituent divisions of our complex economic order makes the life of the whole community sensitive to disturbances in industry and trade.

Many employers who are free from the necessity of dealing with labor unions often contend that as a consequence their plants are not infested with unrest and its resultant wastes and inefficiencies. They forget that the problem of industrial unrest cannot be measured in terms of observable manifestations, such as strikes and boycotts. There is frequently a more subtle form of rebellion, no less real because it is concealed, the existence of which often remains practically unknown to employers and is seldom sensed by the community. This phase of working-class revolt finds its expression in soldiering on the job, consciously practiced inefficiency, unconscionable waste of materials, neglect and abuse of machinery and equipment, and other forms of peaceful sabotage which are perpetrated by large numbers of modern wage earners. Employers often erroneously assume that this kind of retaliation for unfavorable conditions of employment is confined to unionized plants.

Impartial investigation has yielded convincing evidence to the effect that peaceful sabotage obtains regardless of the existence or nonexistence of unionization.[1]

Responsibility for Discontent.—If it were possible definitely to fix the responsibility for these divers forms of maladjustment in employment relations, workable solutions could quickly be devised. The determination of responsibility in particular instances is, however, extremely difficult, if not impossible.

Wage earners, labor leaders, and irreconcilable critics of modern industrialism are quick to blame employers for the conflicts that arise in industry, attributing to them sordid motives of selfishness and exploitation. The validity of such an indictment is, unfortunately, too frequently supported by undeniable evidence from the pages of economic history. There is a regrettable tendency among workers and their leaders to forget that such conflicts are very often the inevitable result of their own consciously practiced waste and inefficiency, the natural consequence of their own fears, suspicions, and hatreds. There is, moreover, abundant evidence of the fact that the workers often surrender to self-seeking, ignorant, corrupt, emotional leadership which is either unwilling or unable to think in terms of mutual interests or to give rational consideration to programs of mutual advantage.

On the other hand, employers and those who share their uncompromising defense of the existing economic system in its totality too frequently attribute all discontent to an inherent obstinacy and radicalism on the part of the workers and their leaders. It seldom occurs to the average employer that part, often a very large part, of the difficulty lies in his own reactionary attitude toward change and improvement in the economic status of the wage earners, his persistent opposition to practically all forms of progressive labor legislation, his unrelenting antagonism to the unionization of his employees, and his own irrepressible suspicions, fears, and hatreds. Nor can employers escape responsibility for that considerable volume of unrest, which has emerged more or less as a direct result of their own preoccupation with the technical problems of production and distribution, to the almost total neglect of the human factor in industry and business. Nobody knows better than they how often employers have surrendered to unwise, incompetent, emotional, and selfish leadership.

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[1] See, for example, S. B. Mathewson, *Restriction of Output among Unorganized Workers.*

Obvious as is the contribution which both employees and employers make to the ever-present stream of industrial unrest, only superficial judgment finds the responsible factors in the philosophy and psychology of these principal parties to industry. The disinterested observer will discover that the causes of trouble are much more complex than this and are inseparably related to numerous other factors. Among these are the technological complexity and the integration of the structure of business, the interdependence and interrelationship of industry and finance, and the separation of ownership from management and control. In addition to these factors, there are certain others, such as the persistence of undesirable conditions of employment, the continuance of unreasonably long working shifts, the absence of an equitable relation between work and pay, the insecurity of the job, and the absence of machinery for the peaceful adjustment of grievances.

The Constituent Problems.—What has been said concerning the fundamental causes of friction in employment relations suggests that the general problem of industrial discontent may in the last analysis be a composite one, the constituent elements of which are a rather extensive series of integral problems. And that is true. The real problems of personnel relations consist of difficulties which revolve about the selection, placement, and maintenance of the working force, and the development of ways and means of sharing certain phases of managerial control with employees. Industrial unrest is merely the manifestation of maladjustments which obtain in the involved and intricate relations of men to jobs, of management to men, and of both to the broader aspects of our economic and political systems.

Unity and balance in employment relations conduce to a maximum of justice, peace, and productivity. When, however, that unity and balance are disturbed or destroyed, friction appears and with it emerges industrial ill will. The constructive function of personnel administration is to devise effective ways and means of maintaining unity and balance in all employment relationships. These objectives are achieved whenever there exists the maximum degree of coordination between the worker and his job, between the job and the conditions which conduce to the greatest efficiency, and between both of these and the managers of technological and human factors in the enterprise.

Looked at more closely, the integral problems, which are constantly disturbing, often destroying, the unity and balance of employment relationships, are extremely formidable. In the first place, there are difficulties which arise in connection with the selection and placement of the working force. Numerous troubles occur because desirable and adequate sources of labor supply have not been developed. Even if the sources of labor supply are satisfactory, stability and efficiency of the working force may be adversely affected because proper technique of selection and placement are lacking. Successful selection and placement, however, depend basically upon an adequate knowledge of the jobs for which employees are selected and into which they are to be placed. That is why the absence of job analysis and job description so frequently contributes to such maladjustments as excessive labor turnover, dissatisfaction, and incompetence. It is obvious, therefore, that industrial peace, good will, and efficiency, which are the objectives of intelligent personnel administration, invariably begin with proper recruitment, selection, and placement. These in turn begin with scientific analysis of jobs and occupations.

A firm may have discovered the importance of developing proper methods of recruiting, selecting, and placing personnel and yet be troubled with numerous evidences of friction in its employment relations. In such cases the basic difficulties may lie in the failure to introduce effective policies and methods of labor maintenance. Briefly this means the development of ways and means of keeping employees contented, efficient, and loyal. Such results are inconceivable in the absence of equitable treatment on the job and throughout the entire work relationship.

The problems of labor maintenance are numerous and often extremely acute. One set of these problems appears in excessive turnover and mobility of personnel, abnormal absence and tardiness, and the lack of interest in the job and the company. Problems and difficulties of personnel administration arise also in connection with transfers, promotions, dismissals, wages, and financial incentives. Much of the inefficiency and unrest in a plant may be due to the absence of adequate facilities for the training of employees and executives, or to the failure to provide other mediums of education and training. Considerably more serious, however, are the troubles which issue from the existence of employment conditions that adversely affect the health of the workers or expose them to unnecessary risks to limb and life. No less serious are the difficulties which are bred by excessive hours of labor, irregularity of employment, and the absence of economic security.

Employers who have introduced progressive methods of selection and placement and who, to their own satisfaction at least, have established desirable conditions of work, an equitable wage scale, and measures of economic security, are still sometimes confronted with what appear to be serious grievances on the part of their employees. In such cases the difficulties develop from the demand of the working force for the establishment of collective bargaining. That is, the workers desire a voice, very often an effective voice, in the determination of conditions and policies which affect their interests. Thus arise the problems of joint control which invariably are among the most perplexing in the whole category of personnel difficulties.

The acuteness of the troubles which arise in connection with the demand for collective bargaining, especially when the demand presupposes the recognition of an independent labor organization, is attributable to the fact that such a demand strikes at the very foundation of the rights, privileges, and prerogatives traditionally cherished by employers as exclusively their own. On the other hand, with the growth of political democracy and its attendant elevation of the status of the wage earner, the workers are inclined to regard the establishment of collective bargaining as an indispensable condition not only of the expansion of their rights and privileges but also of their protection against industrial autocracy. Experience indicates that neither party is likely to yield ground on this vital issue without a struggle, often reinforced by the use of such coercive weapons as the strike and the lockout.

The earnestness and intensity with which the demand for collective bargaining is pressed by the workers and opposed by the employers may be easily understood when one remembers that the acceptance of joint agreements and their enforcement are tantamount to the inauguration of constitutional government in industry. Such a step is not only of major importance to the two principal parties to industry but is pregnant with serious potentialities, some good and some bad, for the community at large. Conflicts over workers' representation in the councils of management assume proportions that dwarf other problems of personnel relations.

Attitudes and Methods of Approach.—So extensive a list of personnel problems as has just been enumerated presents a most impressive assignment for those who are responsible for the successful management of industry and business. A similarly heavy responsibility is likewise imposed upon the leaders of labor. The solution of such difficult problems necessarily impinges upon the basic attitudes and methods with which particularly critical situations are approached. If employers or employees, or both, approach the difficulties with indifference or antagonism, progress toward lasting settlements is quite improbable. If, on the other hand, the approach of both parties is characterized by a sincere desire to discover fundamental causes of friction and to construct mutual agreements based upon justice and fair play, effective solutions are invariably forthcoming.

Because they are prejudiced parties, motivated by economic self-interest, perhaps it is expecting too much to hope that the disputants will attack the problems with the objectivity and detachment of the scientist. Yet, it is only as this is done that mutually satisfactory settlements can be reached.

It is too pessimistic a point of view, we think, to urge that the parties to industrial grievances are incapable of attacking such grievances with a degree of rationality. In the final analysis, the atmosphere of industrial conflict must be cleared of the emotionalism which invariably fills it before joint conferences are possible and he grievances of the moment can be examined with any assurance of successful negotiations. It is of primary importance, therefore, hat both employers and labor leaders be taught to think in terms of he simple relationship of cause and effect. Once this result is achieved, the probabilities of amicable adjustments are greatly ncreased.

A primary requirement of scientific management is that it hall make a rational analysis of the conditions and forces which produce friction, distrust, suspicion, enmity, and conflict between employers and employees. Successful control of human factors in ndustry and business is necessarily constructed on a foundation of cientific analysis. Management must approach the problems of human relationships with the objectivity that has characterzed its approach to problems of technical improvement of production and methods of merchandising. It can scarcely be urged too requently or too strongly that maladjustments in human relationhips are definitely the result of ascertainable causes. Workers do not often consciously become inefficient, willfully waste materials, arbitrarily damage machinery and equipment, or summarily leave he service of their employers for no reason at all. The reason may be illogical or inadequate, but it exists and requires thoughtful, dispassionate attention. Such attention involves a desire to invesigate and examine facts and conditions, a capacity to see these onditions and facts in relation to specific grievances, a willingness to pursue discovered data through to their logical conclusion, and a determination to apply what appears to be the most promising and appropriate remedy.

Unfortunately, the adoption of a rational scientific attitude and its attendant method of approach is often precluded by the persistence of certain traditional points of view. Among employers, one frequently finds a smug indifference, a sort of managerial fatalism, which is totally oblivious to the conditions that incessantly disrupt the peace of industry. Sometimes management is aware of such conditions but either lacks a sufficiently vital interest to examine their relation to accumulated grievances; or, as is more often the case, management adopts a definitely antagonistic attitude which renders impossible a rational analysis of causes and an amicable settlement of disputes.

Still another attitude not uncommonly found among employers is the result of traditional individualism, the by-product of the philosophy of *laissez faire*, which almost completely dominated the industrialism of the eighteenth and nineteenth centuries and persists in the twentieth. This is an attitude born of the tenacious belief in the master and servant relationship. It assumes the existence of the inalienable natural rights and equally inalienable privileges of the master class, and the preordained subjugation of the masses. It fears the humanizing and democratizing tendencies of modern times, uncompromisingly opposes the projection of unionism into employment relations, denounces the expansion of governmental control of employment conditions, and issues dire warnings concerning the potential evils that lie beneath the surrender of established rights and prerogatives.

Obstructive attitudes and tactics are not the exclusive possession of employers. The workers and their leaders frequently harbor points of view which preclude a rational consideration of grievances and the discovery of peaceful settlements. Emotional adherence to the doctrine of exploitative capitalism, the theory of the class struggle, and the philosophy of the revolutionary function of industrial strife is not conducive to an objective and rational examination of disputes or of possible means of adjustment. Fortunately, it is only the social revolutionists among the leaders of labor who believe that there can be no durable amelioration of the status of the worker within the framework of capitalism. The vast majority of labor leaders still believe in economic opportunism, that is, in the wisdom and practicability of labor-management cooperation. Evidence of such belief is abundant in the innumerable trade-union agreements with employers, and in the effective agencies of conciliation and arbitration.

The Absence of a Panacea.—Even so cursory a review of the elemental problems of personnel management as the preceding pages attempt suggests the complexity and intricacy of the difficulties which necessarily confront those who are responsible for the development of practicable remedies. It is obvious to everyone, except the fanatical believer in cure-all nostrums, that there is no single remedy. Each problem in its turn requires separate treatment. There exists no alchemist of industrial relations who can dispense a single specific for all the ills of industry. Viewed practically and realistically, the "labor problem," so-called, is a composite of constantly varying grievances, each as different from its predecessor as it is likely to be from its successor. That is why there can be no solitary solution. Here, as in all fields of human activity, experience constitutes the most dependable guide; results are the only acceptable test of adequacy.

Fundamental Assumptions of Personnel Administration.—It is in the spirit of realism that the management of labor relations, as a division of the general science of management, approaches the conflicts which arise between employers and employees. Not that personnel management is devoid of a spirit of idealism; indeed, it is often accused by both employers and wage earners of being excessively idealistic. But it necessarily deals with realities, because it has to do with jobs and men, and the relation of both to industrial and business enterprise. Realism and practicality are imperative under such circumstances. These attributes of personnel science, if it can be called a science, are revealed in its fundamental assumptions.

1. *Recognition of the Acquisitive Character of Industry and Business.*—Personnel administration recognizes that the primary purpose of industry and business in a capitalistic society is to make money, that profit making is their essential motive. Ours is basically an acquisitive society. So long as the field of economic activity is free to individual initiative, enterprise, ingenuity, and ambition, the gains of industrial and business enterprise will continue to challenge the resourcefulness of individuals, and profits will remain as the motive force to economic endeavor. And so long as profit making is the *raison d'être* of economic activity, management will sustain its interest in economical and efficient operation. It is a law of economic life under capitalism that that enterprise which is organized and operated in the most efficient

manner on the least expensive basis will survive and prosper. An understanding of this salient fact is essential to a clear conception of the reasons for the emergence of problems of industrial relations under modern industrialism.

In their anxiety to make profits, the owners and managers of industry have been so engrossed in the improvement of technical processes, in the procurement of adequate supplies of raw materials, in keeping costs of production at the minimum, and in the dictatorial control of employment conditions, that serious abuses have crept into employment relations. Much thought and attention have been given to problems of production technique; comparatively little consideration has been given, until recently, to the technique of human administration.

What personnel science is rapidly teaching management in this matter of profit making is this: There is not necessarily a conflict between the accepted purposes of economical and efficient enterprise, on the one hand, and intelligent, humanized administration of employment relations, on the other. In fact, many of the exponents of progressive personnel policies urge that, in the last analysis, permanently profitable industry or business depends upon the successful management of human relations. If economic experience proves anything, it is that industrial good will is a first requisite of productive enterprise.

Employers have rather generally recognized that profitable industry and business depend upon certain well-defined conditions. There must be an adequate supply of capital for the original organization and initial operations, together with additional amounts of capital to meet the needs of expansion. Credit must be available as needed. There must be a sufficient supply of raw materials at reasonable cost, and an efficient technical organization for the conversion of these into finished products. An adequate and competent supply of labor must be recruited. Organizing and directing ability must be obtained to utilize mechanical and human forces to their utmost potential capacity. Markets must be found to assure sustained sale of the product.

What the employer has not always realized is that an adequate supply of labor and technical factors is not in itself a guaranty of efficient production. The good will and cooperation of the workers must be obtained if the best results are to be forthcoming. The science of personnel management, therefore, appropriately reminds the employer that intelligent and equitable control of human factors is no less indispensable to economy and efficiency than are the scientific organization and direction of mechanical forces. And yet a distinguished American captain of industry was voicing the point of view of many of his fellow capitalist employers when he declared that the management of industry is primarily a management of things.

2. *Rejection of the Commodity Concept of Labor.*—Personnel science is constructed on the basic belief that labor is not a commodity. From this point of view it is only one-half of a truism to say that management of industry and business is essentially a management of things. The other half (the more important one) is that management of industry and business is fundamentally a management of persons. It would be more nearly accurate perhaps to say that industrial administration is in reality a management of persons in relation to things; that is, in relation to materials, machinery, equipment, processes, jobs and the whole enterprise, both in its personal and its impersonal elements. The term "labor" is, after all, only a convenient word referring to a multiplicity of human beings who possess minds, personalities, self-respect, a desire for improvement, hold membership in a civilized community, and have numerous other attributes which preclude their identification with inanimate, material commodities.

Labor resembles a commodity in that, like other objects of exchange, it commands a price on the market. The quality of exchangeability, however, does not reduce human beings to the level of impersonal things. The energy and skill which are sold by the laborer are inseparable from his life and personality; these are essentially a part of himself. What happens to the commodities which a merchant sells is of no consequence to him once they are delivered and paid for. The purposes for which these goods are used, the method of using them, and what finally happens to them do not concern him in the least. It is quite otherwise with the worker who sells his labor power; he must accompany what he sells, and the conditions and methods of its use are of vital concern to him. His own immediate welfare, the welfare of his family; his future and, consequently, the future of those who depend upon his economic efforts; his health, and his very life—all are invariably involved in such a transaction.

There are other important differences between laborers and commodities which all personnel departments worthy of the name fully recognize. Commodities have a relatively high degree of mobility and can be shipped readily to the most favorable market. Laborers enjoy no such mobility; financial considerations, family ties, inertia, fear, ignorance of more favorable markets, and numerous other factors restrict the free migration of the average workman. Labor, moreover, is characterized by extreme perishability and, like perishable commodities, it must often be sold at a forced sale on an unfavorable market. The average worker cannot afford to wait for a more attractive opportunity to sell his skill and energy, since to him a day lost is irretrievable. Seldom does the merchant find the disposal of his product of such vital importance as is the sale of labor power to the wage earner. The worker's financial reserve is usually so small that idleness for more than a brief period is likely to entail severe hardship.

The replacement of labor is comparatively a difficult and slow process, since it normally depends upon the birth rate and the growth of human beings. Long periods of time are thus required to replenish a country's labor supply. The replaceability of commodities is usually only a matter of days or months.

Finally, labor is not, like commodities, a passive object. Rather it represents conscious human personalities with a mosaic of native and acquired tendencies, socially determined modes of behavior, and an almost insatiable desire for a more complete life. Active and alert to new sources of satisfaction and happiness, workers as human beings are naturally sensitive to new comforts, new pleasures, and improved standards of living which education and acquisitive industry and business bring to their attention. Moreover, workers are as capable of resentment as they are of cooperation; hence, they will not accept willingly any attempt either to depress their established standards of living or to prevent progressive improvement in their ways of life.

3. *The Necessity of Coordination between Mechanical and Human Factors.*—Intelligent administration of personnel rests partially on the assumption that the successful coordination of mechanical and human forces is a primary requirement of the fulfillment of the socially defined aims of industry and business. Those aims center about service to the community. "Service" is a term which in the business world has been almost wantonly moralized, hence has become trite. Nevertheless, it is an inescapable fact that the basic function of industry and business is to produce commodities and render service, upon both of which the welfare and advance of the community necessarily depend. To this function of service profits are incidental; no enterprise remains profitable for long unless it provides a commodity or a service which the consumer needs and desires. The sustained flow of goods and services is possible only

when men and women are so managed as to assure successful operation.

4. *The Difficulty of Human Administration.*—The solution of problems of personnel relations often appears to the outsider a relatively simple matter. Personnel managers, intimately associated as they are with the intricate ramifications of those relations, know better. Experience has convincingly demonstrated to them that the management of human relations in industry is attended with far greater difficulties than is the management of mechanical factors. The most perplexing problems are invariably those that revolve about the human equation. That equation involves the relation of the worker to his work, his immediate supervisors, his company, his community, and, in turn, the relation of these to him.

The perplexities arising in the administration of men and women develop from a fact already suggested; namely, that the human factor is not a passive, inanimate one, as are machines and materials, but rather is an active agent capable of cooperation or noncooperation. The inborn traits of human beings are not easily apprehended; much less easily are they directed into defined channels. In a democratic community, moreover, laborers are endowed with a large number of rights, privileges, and opportunities which they expect the managers to recognize and respect.

5. *The Possibility of Scientific Management of Labor Relations.*—Although it fully recognizes that the control of human forces is characterized by less certainty and more difficulty than is the case with material and mechanical factors, personnel science is constructed in part on the theory that it is quite possible to apply to the management of human relations certain rational principles and methods of procedure. Both logic and experience provide substantial support to such a theory. The problems of labor relations most assuredly, as already indicated, are the result of definite causation. It is reasonable to assume that such causes can be ascertained and removed. The difficulty lies in the discovery and application of remedial measures. That is the function of personnel science, the science of human administration, which has proved conclusively through decades of experience that there is a right way and a wrong way of managing human beings. Although it is as yet in its infancy, the science of human engineering has registered creditable accomplishments, as succeeding chapters of this discussion will reveal.

Because it has to do with human forces, the science of human engineering is necessarily less exact than the physical sciences, such as physics, chemistry, and astronomy, and has less precision than mechanical, civil, and electrical engineering. This is because the phenomena with which the science of human administration deals are more complex than those which are treated by the physical sciences. It is only with the perfection of the sciences of physiology, psychology, and economics that the elements of a science of personnel management can be constructed. Already a considerable body of principles and methods of procedure in the handling of human relations in industry has been discovered and successfully applied. Our study reviews those principles and methods in relation to the particular personnel problems which they are designed to solve.

6. *Identity of Interests in Industry.*—One of the principal hypotheses of personnel management is that the basal interests of employers and employees are identical. The validity of this hypothesis is seriously challenged by many and completely rejected by not a few. In refutation of this theory it is contended that the history of industry proves the natural and inevitable conflict of interests between employers and employed. It is urged that employers are concerned primarily with profits, while the wage earners are primarily concerned with wages. The implication is that because the employer is interested mostly in profits he constantly seeks to reduce the cost of production, including wages, to the lowest possible level. On the other hand, because the worker is interested mostly in wages, he is concerned only about the continuation of his job and so consciously practices limitation of output. In other words, the employer desires to get as much work done as possible for as little pay as is necessary, whereas the worker desires to get as much pay as possible for as little work as is necessary.

No one familiar with industrial relations will deny the truth of such assertions. But this does not necessitate the admission that such an attitude on the part of the workers or of the employers is either economically sound or socially justifiable. It may be, after all (and this is the assumption of personnel science), that greater economic advantage would accrue to both parties if they would frankly recognize their mutual interests in efficient production, economic operation, profitable enterprise, and desirable standards of work, hours, and pay. Personnel science can have meaning and significance only in so far as it adheres to the hypothesis that the substitution of industrial cooperation for industrial conflict will yield greater net returns for capital and labor.

The Desires and Aims of the Parties to Industry.—A knowledge of the basic desires of employers and employees and of the community's interest in industrial peace is a necessary condition to a solution of employment relations. It would be impossible, of course, to catalogue all the needs and desires of the immediate parties to industry, and perhaps even more impossible to ascertain all the wishes of that heterogeneous mass commonly referred to as the "public." Only a brief summary can be attempted here.

1. *The Needs and Desires of Employees.*—There is every reason to believe that the average wage earner desires economic security more than anything else which comes within the wide range of his needs. Economic security consists of many important assurances. In the first place, it comprises protection against unjust and indiscriminate discharge. The worker wants to be fairly certain that an arbitrary and dictatorial boss, suffering from chronic indigestion or obsessed with racial, religious, or political prejudice, will not have the unquestioned and unlimited power to dismiss employees for an insignificant cause or no cause at all. The fear of being summarily discharged for the slightest infraction of disciplinary rules or for difference of belief, opinion, or conviction not only disturbs the worker's peace of mind but appreciably reduces his usefulness.

Economic security also implies freedom from the fear of seasonal and cyclical unemployment, that is, the reasonable assurance of steady work. Much of the purposely practiced limitation of output, and, hence, the failure of employees to function to the best of their potential abilities, is traceable to the failure of modern industry to stabilize production and employment.

The worker desires not only a steady job but a steady job at good wages. He wants an income sufficiently large and regular to assure the maintenance of a decent standard of living for himself and his dependents. He desires, moreover, that a reasonable income shall be assured him in times of illness and accident; that ample provision shall be made for the exigencies of old age, a decent burial, and a measure of economic protection for his family in case of his death.

Closely related to this matter of economic security is the desire for physical security. The normal workman desires the greatest possible protection against physical injury, occupational disease, and accidental death. It is true that many employees suffer a relapse into indifference with regard to the hazards of industry; they often become grossly careless and negligent. In the case of the average worker, this relapse is likely to be only temporary. The average workman does not remain permanently indifferent to safeguards of health and life.

Being human, the wage earner naturally wants a congenial and happy relation in his work. This means that he wants a job that he likes, one that he can do with the required degree of efficiency. It also means that he wishes an opportunity to impose himself upon his job, to develop something of his creative ability, and to have something to say about how the work shall be done. The normal workman does not enjoy having his whole individuality lost in the monotonous routine of the machine process or the deadening minuteness of repetitive operations. The fact that so many modern wage earners are apparently not interested in their jobs is not proof that under a more enlightened and more humanized system of labor administration they would fail to respond willingly and zestfully to a demand for better workmanship.

Finally, the workers want some sort of representation in the councils of industry. They probably seldom think it necessary to have representation on boards of directors. If, however, industrial history has taught any lesson, it is that workers want established channels of communication between themselves and the management. This involves the right to select their own representatives for joint conferences with the management concerning such vital matters as wages, hours, conditions of employment, and dismissal.

2. *The Needs and Desires of the Employer.*—It is not always so difficult to discover what employers want as it is to ascertain what is in the mind of the worker. This is partly because employers are relatively few in number, and partly because our economic organization has been such as to give them greater freedom and opportunity to express audibly what they desire. Briefly, employers generally desire the greatest possible output at the least possible cost; recognition of and respect for their traditional rights and powers in the organization and management of their enterprises; freedom to develop new ideas, new processes, and new equipment, without interference from either labor unions or governments; sustained growth of their industries and businesses; and the unreserved cooperation of their employees in whatever program of operation is scheduled.

3. *The Community's Needs and Desires.*—Although employers and employees frequently evince a tendency to disregard it, the fact remains that the community, which includes all individuals in a given political unit, has a clearly defined interest in the administration of human relations in industry. The community (the municipality, the state, and the nation) is vitally interested in the uninterrupted flow of goods and services at reasonable prices.

The maintenance of industrial peace and the security of economic and social institutions are essential to this end. An efficient, economical, and peaceful industry contributes to the general prosperity.

The community will not interest itself much in the technical phases of production and distribution; it is usually content to leave these matters to those who are competent to handle them. Unfortunately, moreover, society seldom takes a keen interest in the problems of human relations in industry and business until the peace of industry is disrupted and the public is deprived of its customary goods and services. At such times governments either intercede with proposals for conciliation or, if the community is suffering unduly, threaten coercion unless an early settlement is forthcoming. The equities or inequities of particular cases do not bother the community very much; it usually wants peace at any price, and commodities at the lowest possible price.

The Scope of Our Study.—If the foregoing discussion of the nature of industrial unrest and its causes is correct, it is clear that the problems of personnel relations fall into three categories as follows: (1) problems of recruitment, selection, and placement; which involve getting the worker and assigning him to his appropriate place in the organization; (2) problems of maintenance, which have to do with keeping the worker in the service of the company; and (3) problems of joint control, which issue from the necessity of establishing agencies of communication between management and employees.

In considering briefly the causes of conflicts in employment relations, it was suggested that certain forces in the development of modern industry and business had contributed greatly to such conflicts. It will, therefore, aid in the orientation of our study of personnel problems and their solutions if we review the broad outlines of the evolution of modern industrialism. This will help us specifically to see the interdependence and interrelationship of the present and the past. A summary of the evolution of modern industrialism is, consequently, presented in the succeeding chapter.

Whatever solutions of personnel problems are forthcoming will necessarily have to have the sanction of the general management. In a relatively large number of progressive firms, the responsibility for discovering and applying such solutions is delegated to a specialized department of personnel administration, functioning, of course, as an integral part of the general management. Hence, the necessity of examining the organization and functions of the personnel department, as well as the basic principles and methods of the whole science of management. To these tasks the remaining chapters of Part I are devoted.

It is quite generally agreed that the successful management of personnel is fundamentally a matter of understanding adequately and guiding wisely the elements of human nature. If this be true, it is essential that the science of management, especially that division of it which deals with employment relations, shall take due cognizance of the human equation. This necessitates familiarity with inborn and acquired traits of human nature. These psychological aspects of personnel relations are the subject matter of Part II.

The problems of recruitment, selection, placement, job analysis, and the methods of procedure in solving them are examined in Part III. In Part IV, the problems and methods of personnel maintenance are analyzed and described. Part V considers personnel problems in the civil service, and Part VI is devoted to a consideration of the problems of employee representation and the machinery which has been developed for joint control.

So broad a survey of the problems of employment relations and the principles and methods of personnel administration as is indicated above must necessarily lead to a critical examination of the whole technique of management. Such an appraisal is attempted in part VII of our study, with which the analysis is concluded.

Any study of the problems of personnel relations and the methods of their administration must proceed primarily from the standpoint of management. This is because the problems of procedure in handling human relations in modern enterprise are essentially problems of managerial technique. To be complete, the analysis must attempt to interpret to the worker the difficulties of management, and to management the difficulties of the workers. It must, moreover, take cognizance of the larger social interests which impinge at various points upon equitable relations in industry and business. As suggested in the preceding pages, the economic organization of a country is a means to an end rather than an end in itself. That end is dominantly social; namely, the enrichment of human life through the satisfaction of ever-expanding wants and desires. From a social point of view, however, the achievement of that end through the exploitation of the workers is undesirable and, consequently, unjustifiable. Industry cannot be a vehicle of genuine social progress if its own advance is purchased at the expense or sacrifice of those who are so largely responsible for its success.

CHAPTER II

THE DEVELOPMENT OF LABOR RELATIONS

The Changing Character of Employment Relations.—If history can be said to have a social function perhaps it may be found in the capacity of that discipline to chart the seas of human experience and thus to assist humanity in avoiding the mistakes of past generations. It is certain that the past cannot, with impunity, be disregarded in the formulation of programs of reconstruction for the present and the future. This is the conviction that lies behind a survey, albeit a very brief one, of the historical development of industrial relations in a book which purports to deal with problems of contemporary labor relations.

Historical perspective should contribute appreciably to our understanding of the essentially dynamic nature of our economic organization, particularly that of employment relations. It should, moreover, enable us to perceive more clearly the intricate character of the forces that are responsible for economic changes. And if we view historical trends with any degree of impartiality, we shall discover evidence of the fact that despite periodical reactions there has been an advance in the general status of the wage-earning class, as well as in the principles and methods of labor administration. Significant among the lessons of the history of capitalism are these: that employer-employee relations are ever in a state of flux; that not only have there been great changes in the position of the worker but also definitive progress.

The Early Status of Labor Relations.—The history of employment relations is an interesting record of the rise of the laboring classes from servitude to status and from status to economic emancipation through freedom of contract which, although yet inadequate, gives evidence of increasing industrial democracy.

Almost the first laboring class which history records was composed of slaves. Although in all early civilizations there existed numerous groups of handicraft workers skilled in the art of making interesting things of economic value, early industrial relations must be studied primarily in conjunction with the institution of slavery. This institution had its origin in military conquest. As society advanced from savagery and barbarism to civilization, sympathy and insight discovered the economic and social advantage of substituting servitude for slaughter. In nearly all of the great militant nations of the world, the laboring class has passed through the stages of slavery and serfdom. Except on the grounds that even at its worst life is cherished by the average human, the substitution of servitude for death frequently has presented little to choose between the two. Yet this step represented a definite advance in the progress of the masses.

The hieroglyphics of the tombs and temples of ancient Egypt bear mute testimony of the fact that its early civilizations were founded largely on slave labor. The records of those civilizations indicate, moreover, that even nonslave labor, whose skill contributed so generously to the artistic beauty of the nation's great monuments, was given only meager reward in kind, such as wheat, oil, or wine. Under such circumstances, employment relations were naturally predominantly autocratic, and the treatment of the laborers was extremely cruel. It has been appropriately observed that slavery was "the whip that built the pyramids, dug the canals, and carried through most of the monumental works which remain today in Egypt."[1] How intolerable were the workers' tasks and how harshly they were treated are almost self-evident to anyone who looks upon those great monuments and acquaints himself with the significant fact that they were constructed with the aid of only the most rudimentary instruments, mostly by the direct application of human energy.

In early Greece, industry was carried on by free men, and the joy of creative workmanship is said to have been quite prevalent among master craftsmen and their apprentices. Artisans apparently took commendable pride in their individual contributions to the monuments that were to decorate the various communities. The unusual dignity that was associated with the manual arts, as well as the absence of chronic unemployment, were probably the natural result of the prevailing scarcity of skilled artisans. To women, children, and slaves were given the rough and menial tasks, although slave masons seem to have shared the work of free masons and to have received the same pay.[2] Economic security may have been responsible for the existence of a conspicuous spirit of congeniality and comradeship among the workers. Prices and wages were regulated and standardized by custom, which precluded

[1] Price, G. M., *The Modern Factory*, p. 3.

[2] Zimmern, A. E., *The Greek Commonwealth*, 1922 ed., p. 263.

organized struggles for improved standards and left the workers free to cultivate their creative abilities. Assured a livelihood and a goodly measure of security, acquisitive motives were subordinated to creative interest in work. Public esteem was generously bestowed upon the skilled craftsman, and so few were the abuses in employment relations that public regulation was unnecessary.[1] The position of slave labor was, of course, quite different from that of the skilled, free worker.

Work, which in early Greece was considered honorable and dignified, later became associated (in the minds of aristocratic Greeks) with that which is sordid and shameful. Employment for wages was regarded with contempt by the Athenian philosophers. Little wonder, therefore, that interest in the laborer was at a very low level and that, consequently, his status, especially in the case of slaves, was a pitiable one. Those slaves who were not killed off by excessive toil were sent to premature graves by frequently recurring plagues and epidemics. Next to the slaves, the common laborers were esteemed the lowest class in the community, their life and work being considered ignoble and shameful.

The Status of the Worker under Slavery.—In order that we may appreciate the change that has taken place in the position of the laborer, it will be helpful to glance more closely at the institution of slavery. Under slavery all the rights and privileges were claimed by the owner-master; all the obligations rested upon the laborer. In slavery, as in serfdom, the laborer was born into a definite status of subserviency, having none of the independent rights of agreement which emerged later in the stage of free contract.

The slave remained what he became under Român law, namely, a chattel, the property of his master, having none of the dignity that attaches to a free member of the community. He could not enter legally into marriage. His wife and children were not his before the law. He had no control over his own future. As the great body of producers in ancient civilizations, slaves received less consideration than animals. Their hours of labor were limited only by physical exhaustion; their food was coarse; their shelter inadequate. Conservation of the slaves was inconsequential, since with each new conquest long lines of captives streamed through the gates of those ancient cities and they could be purchased at very low prices. It was thus more profitable to wear them out than to provide adequate care and sustenance for them. Legal personality could be acquired by slaves only by the statutory act of emancipation, and emancipation was unusual because of the common belief that slaves were preordained by divine decree to toil that the favored few might live in ease and affluence.

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[1] *Ibid.*, pp. 271, 272.

The slave had no interest in his work. Condemned to a life of ignorance, he had no incentive to the cultivation of his higher faculties. Enlightenment was denied him lest he learn something of the potential joys of freedom. The absence of education and training precluded his assumption of responsibilities requiring care, forethought, and dexterity. For him there was no stimulus to initiative, no spur to ambition.

The worker under slavery remained in industrial and social subserviency until the forces of religion and reform, reinforced by the economic changes which made free labor more desirable, paved the way for his improvement and his ultimate liberation. By the end of the nineteenth century, slavery was officially abandoned in advanced industrial countries. It exists today only in the most remote and backward regions of such lands as Africa.

The Status of the Worker in the Rural Community of the Middle Ages.—In the course of economic evolution slavery shades off imperceptibly into serfdom. Even in Roman days masters of landed estates often found it to their advantage to convert their slaves into serfs and allow them to settle on the land. Gradually the laborer came into possession of certain legal rights and a measure of freedom. The status of the worker under serfdom is illustrated in the economic organization of Europe from the eighth to the eleventh centuries.

Life in the Middle Ages was almost wholly agricultural, the title to the land being vested in feudal lords. Whether the lord was a great baron or a lesser member of the gentry, the employment relation was practically the same everywhere under the manorial system. There were "free tenants" or those who were independent tenant farmers, and "cotters" who held only small tracts. The majority of the population were "villeins" or "customary tenants," in whom our chief interest is centered. These individuals, referred to also as "serfs," were quite unlike slaves in that they could neither be sold nor deprived of the right to cultivate the land assigned to their exclusive use. They were not tenant farmers in our sense of the term, since they paid no rent for the land which they tilled; they were not free laborers, because they were attached to the soil on which they were bound by law to stay.

The serf could not be sold, although the soil to which he was inseparably attached might be transferred with him to another lord. For his own benefit and the support of his family, he tilled the plot of land assigned to him and near this in the village he built his permanent home. Certain levies could be made upon him for his lord's table, but his main obligation was to give a more or less definite proportion of his labor time to work on his lord's demesne. His status as a worker was still obviously undesirable. Bound to the soil, he could not leave the manor to improve his life elsewhere. If he ran away, he was ordered back by the court. To obtain permission to remain in another town, he had to pay a special sum of money. He could not dispose of his cattle without the sanction of the law. He had no standing in the courts, and for redress of wrongs he had recourse only to the manorial courts which were presided over by his lord's representatives. Yet, serfdom marks a step forward in the economic position of the laborer, since he enjoyed certain rights over his own property and person, including the right to bequeath his property to his children.

The Worker in the Urban Community of the Middle Ages.— Employment conditions and relations in the craft guild organization of the urban community of the Middle Ages are of special interest to the student of economic evolution. The craft guilds were associations of citizens, chartered either by the town government or by the crown, for the purpose of regulating and preserving a monopoly of their own occupations, just as the merchant guilds sought to regulate and control the monopoly of their own trade. Full membership in the craft guild was reached only by artisans who had passed through the successive stages of apprenticeship, journeymanship, and master craftsmanship. Observance of generally accepted standards of manufacturing was a primary duty in the guilds.

Apprenticeship varied, but everywhere the basic ideas and purposes were similar. The employment relationship involved mutual obligations on the part of the master and the apprentice. Under the terms of the agreement, usually a signed contract between the master and the parents of the apprentice, the master obligated himself to provide all necessary food, clothing, and lodging; to teach the lad the technique of the trade; to give him social advantages; and, in some cases, to furnish schooling and a small wage. The duties of the apprentice were to keep secret his master's affairs, obey his commands, and behave circumspectly at all times. Upon the completion of his term of training, which varied at different times from 4 to 10 years, the apprentice became a journeyman, or full workman. As such, he served for wages in the employ of his master and often saved enough money to equip a shop of his own.

Then, as a master craftsman, he was admitted to all the rights and privileges of the guild.

The master did not always fulfill his obligations to the apprentice, but there is abundant evidence to the effect that employment relations were for the most part intimate and congenial. Since all industries were really household industries, carried on in the dwellings of the craftsmen, no establishments were very large, and the difference in the status of master, journeyman, and apprentice was not so pronounced as to constitute a source of friction. "Drawn from the same social status, united by a sense of common interest, masters and men in the early days of industrial development could toil side by side in willing cooperation, undivided by the antagonism of capital and labor. . . . There were no permanent classes of employers and employees, the one rigidly divided from the other by an almost impassable barrier of wealth and social status."[1]

The opportunity for economic independence which the industrial system of the times afforded was undoubtedly an important factor in the peaceful and cooperative relations that obtained in the Middle Ages. As an apprentice, the worker not only learned the specialized knowledge and mysteries of his craft but was imbued with the ideals of good workmanship and high quality of product which were so greatly cherished by the guilds. Once he had reached the status of journeymanship, he looked forward eagerly to the time when he would cease to be a mere wage earner and would take his place among the masters of the guild as a fully qualified craftsman. This meant that he would share in the common life of the community, help shoulder its civic responsibilities, and enjoy its privileges and opportunities.

It cannot be gainsaid that the craftsman of the Middle Ages enjoyed an independence not characteristic of the modern wage earner. The former owned his own shop and equipment and controlled the conditions and hours of employment within the limitations prescribed by the guild. The road to economic independence was relatively free to those who possessed sufficient industry and ambition to travel it. Thus a common source of industrial conflict was removed because industrial ownership was a real possibility for the worker.

The guild made numerous rules which governed the monopoly of the craft and safeguarded the welfare of its members. Hours of labor were regulated, including such matters as prohibition of night work, as well as work on Saturday afternoons, Sundays, and other holy days. There was systematic inspection of goods, workshops, and prices. Definite rules guided the activities of mutual assistance and benevolence and controlled the conduct of journeymen and apprentices.

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[1] Lipson, E., *An Introduction to the Economic History of England*, vol. I, pp. 288, 345.

The Passing of the Old Order.—The forces of economic and social change function with relentless persistency; old economic and political systems yield to new. A significant factor in the transition from the established order of the Middle Ages to that which succeeded it was the Black Death, a terrible plague which swept over Europe in the middle of the fourteenth century, destroying in England alone approximately one-half of the population. England consequently faced a critical situation. Economic changes were increasing the demand for labor and the great plague had diminished its supply. The workers sensed their strategic position and refused to accept the customary rates of pay. Royal decrees designed to compel the laborers to accept the old conditions of employment were unheeded, and even the serfs took advantage of the labor scarcity to gain their freedom. In 1351, the first Statute of Laborers was enacted to force workers to accept offers of employment at "reasonable wages or suffer the alternative of imprisonment." This measure was followed by several others, all of which were obviously passed in the interest of employers who alone were represented in parliament. Such laws could scarcely receive the sympathetic response of the wage earners who, although they suffered much in the enforcement of the statutes, did not cease to demand improved employment relations.

Reconstruction of the economic and social order moved forward steadily, despite ruthless attempts to suppress freedom of thought and action designed primarily to maintain the *status quo* in employment relations. Gradually, money payments were substituted for the old exactions until labor service by serfs was practically unknown. The great mass of the rural population of England by this time was comprised of free men from whom the shackles of serfdom had fallen for all time.

The urban civilization of Europe between the middle of the fifteenth and the end of the sixteenth centuries experienced similar changes. Whereas the worker formerly rose from apprenticeship to master craftsmanship, involving ownership and employer status, there was now a marked tendency for artisans to remain permanently in a subordinate wage-earning class. Deliberate restrictions imposed by the master craftsmen, coupled with a lack of capital and initiative, increased greatly the number of dependent wage earners. Soon there emerged "yeomen" or "journeymen" guilds, organized by these workers for mutual protection against exploitation and for the purpose of making agreements with master craftsmen concerning the conditions of work and wages. Thus, the precursor of the modern trade union appeared.

With the rise of nationalism and the resultant centralization of power in the hands of national governments, state regulation of labor relations was encouraged. Mercantilism, with its economic protectionism, made industry the protégé of governments. Incident to this whole movement was the revival of the old statutes of laborers in the form of the Statutes of Apprentices (England, 1563), which provided for compulsory labor and prescribed the conditions of employment. Wages, hours, and conditions of work were rigidly regulated, as also were the terms of apprenticeship. Freedom of employers and employees was greatly restrained by law.

The force of law could not, however, stay the operation of economic tendencies which were ushering in a transition to a new industrial organization. In the period between 1603 and 1760, industry in England was organized chiefly on the basis of the "domestic system." The presence of an increasing number of independent artisans unwilling to conform to the exactions of guild membership encouraged the growth of a merchant or manufacturing class, called "merchant clothiers." These capitalist merchants purchased wool or other raw materials and gave them out to craftsmen, paying them for their work and disposing of the product in domestic or foreign markets. Thus appeared a new class of employers who hired men for definite wages, directed the business enterprise, provided raw materials and much of the capital, and assumed charge of the sale of the product. The network of employment relations was taking on a more intricate form, and the last half of the eighteenth century was destined to witness more revolutionary changes in the organization and operation of industry and business.

The Birth of Capitalism.—The expansion of English commerce and the growth of world markets in the seventeenth and eighteenth centuries made old methods of manufacture and transportation obsolete. The first half of the eighteenth century ushered in the beginnings of the industrial revolution, which was to sound the death knell of the old feudal industry. Steam and machinery were soon to revolutionize methods of production and distribution. The great inventions of the eighteenth century accelerated the movement for capitalization of industry and business that had already appeared in embryonic form in the domestic system. The final outcome of this trend was the modern factory system with its emphasis upon machine methods, division of labor, and large-scale production.

The new machinery was too expensive for the old cottage weaver to buy and use, and, with the invasion of machine methods in other fields, the craftsman found it increasingly difficult to establish his own enterprise. In most industries, the small master was driven into the wage-earning class, and the large master, who was able and willing to assume considerable risk and responsibility, became the modern capitalist employer.

Moneyed men without previous experience in industry were drawn into partnership with machine spinners and weavers. The new industry called for close supervision of relatively large bodies of workers employed for regular hours, in buildings where machines were placed and power supplied. "Mill hands" gradually drifted to the centers of manufacture and became what they have remained ever since, namely, seekers after jobs which are owned and controlled by those who have acquired possession of the machinery of production. Thus, the modern factory with its machine process, definite working day, and specified wages was born, a new and dominating factor in economic civilization since the closing decades of the eighteenth century.

The Doctrine of Economic Freedom.—Contemporaneously with the revolutionary changes in the organization and operation of industry and business, there developed a no less important reconstruction of ideas concerning the relation of the state to industry. A new concept of liberty was disseminated, which was unalterably opposed to the old mercantilistic regulation of economic life that had prevailed during the preceding centuries. The essence of the new doctrine was that men and women should be accorded the greatest possible freedom in economic relations. Each individual was to be free to engage in those economic pursuits which he deemed to his own advantage, and governmental regulation was to be reduced to the absolute minimum compatible with public safety. In his *Inquiry into the Nature and Causes of the Wealth of Nations*, published in 1776, Adam Smith, premier champion of the new philosophy, insisted that it was a plain violation of a man's most sacred property to hinder him from employing his strength and dexterity in whatever manner he chose. Interference by the government was viewed as a manifest encroachment upon the liberty of the workman and of the employer who might wish to hire him. "As it hinders the one from working at what he thinks proper, so it hinders the other from employing whom he thinks proper," stated the founder of modern economic science.

The new philosophy, as expounded by the creators of modern economic science, was designed to prove two propositions. The first of these was that if left to his natural tendencies, every man would pursue his own interests in his own way, bringing his intelligence, energy, and capital into the freest competition with his fellows. This, it was contended, would redound to the maximum advantage for everyone. The second proposition was that certain natural laws govern economic relations and activities, interference with which always proves harmful and futile. Self-interest and the inexorable law of supply and demand were thus conceived as guiding the destinies of the nation. It was assumed that the state could do nothing by means of statutory regulations to improve the status of the wage earner and that the employer could not injure him. Laborers were supposed to be in the hands of a power (natural law) which by its very essence would secure to the workers all the freedom and comfort that they were capable of enjoying and protect their immediate and ultimate interests. Hence, to the state it was said, "*Laissez faire, laissez passer*"—let things alone.

This theory, known ever since as the philosophy of individualism, was destined to have a far-reaching influence upon the relations of employers and employees, and to be responsible for many of the benefits and not a few of the ills of modern capitalism. One by one the old legal restrictions upon capital and labor were repealed and free competition became the shibboleth of the new era.

The New Capitalism and the Relations of Capital and Labor.—The worker's loss of ownership and control of the technical means of making a living, which, as a craftsman, he had suffered increasingly under the domestic system of industry, became more complete as modern industrialism with factory organization and large-scale operations developed. The transition from the domestic system to the factory system was practically accomplished when machinery was substituted for human power and simple hand tools in the manufacture of commodities. The workers, under the new regime, were drawn away from their homes and concentrated in factories and workshops owned and controlled by capitalist employers. Henceforth, labor power was for the most part to be sold to an employer who furnished materials, tools, equipment, machinery, workplace, and supervision, and who owned and marketed the product of the enterprise.

Remarkable as was the technological phase of the transition from the old to the new economic order, it was not effected without incalculable misery to the immediate generation of laborers and far-reaching consequences for future generations. The workers were not able to adapt themselves successfully to the new industry. Wages were sometimes higher than under the old regime, it is true, but they were also less regular. Fluctuations in employment followed upon the failure of the organizers of the new industries to control the wider commodity markets, which now became international. Emergence from the laboring class was becoming increasingly difficult, because of the relatively large amount of capital and greater organizing skill required for the establishment and operation of plants. Human happiness, at least as far as the working class was concerned, was not appreciably increased. For a time, indeed, the masses were on the whole worse off than they had been under the old and less dynamic order.

The new liberty in employment relations soon degenerated into license. Industrial and social ills developed *pari passu* with the new capitalism, ills which were appalling to the finer sensibilities of those who looked upon industry as an agency of human welfare. Low wages, high prices, irregular employment, crowded conditions of work, unsanitary living conditions, child labor, exploitation of women workers, dirt, disease, filth, suffering, persecution for unionist activities, and general social and economic injustice conspired to make the lot of the wage earner an unenviable one. Wealth accumulated rapidly; so did want, poverty, and misery. Fierce competition among producers in the commodity markets forced a policy of rigid economy, and wages offered an easy point at which to begin the pruning.

The new capitalism continued to grow, and its expansion during the succeeding centuries is a story of remarkable achievement and recurring crises in the relations of employers and employed. From England, the new industry spread to other countries of the Old World, to America, and finally to the Orient, where Japan at this moment is experiencing revolutionary developments in her industrial life. In the United States especially, the changes assumed an evolutionary rather than a revolutionary character. Here the presence of free land and abundant natural resources, coupled with scarcity of labor, have mitigated the evils incident to the new industrialism. But serious problems have followed in the wake of the machine process, factory organization, and large-scale operations.

The Revival of Social Regulation.—The numerous and excessive abuses that have appeared under the new economic system not only have led to the restoration of governmental regulation of employment conditions but have released the energies of revolutionary movements, which always thrive under the stimulus of poverty and oppression. Social control of industry and labor relations has expanded with increasing effectiveness. Even in the early stages of capitalistic development it was apparent that absolute freedom of contract was a concept inapplicable to a situation in which the parties to an agreement were neither politically nor economically equal. Governments were compelled, therefore, to interfere in order to assure something approaching equality of bargaining power and to safeguard their human resources.

Not infrequently joint agreements between individual employers or associations of employers, on the one hand, and unions of wage earners, on the other, have eliminated part of the necessity for governmental control. Even in the absence of established agencies of collective bargaining, innumerable corporations in every part of the world where modern capitalism has developed have introduced constructive policies and methods of dealing with problems of employment relations.

CHAPTER III

THE NATURE AND FUNCTIONS OF MANAGEMENT

The Complex Structure of Modern Industry and Business.—The problems of human administration in modern industry and business are but one phase of an intricate network of problems which has emerged from the increasing complexity of our system of production and distribution. The industrial revolution, which originated in England in the early years of the eighteenth century and has continued its irresistible march of invention and technological change into the twentieth, has been the most dominant factor in this growing complexity of our capitalistic economic society. These revolutionary changes in the methods of production and distribution have produced an intricate industrial and business organization. Moreover, they have been responsible for the existence of more or less impersonal human relations, and a conspicuous emphasis upon mechanization, mass production, standardization, and efficiency.

Nowhere has the new industrialism presented more puzzling ramifications or evidenced greater flexibility and vitality than in the United States. Among the nations of the contemporary world, this country stands preeminent as the exponent of the most advanced forms of industrial and business organization and operation. Here modern capitalism may be seen in its most flexible and revolutionary character. Old machines are quickly scrapped in favor of new ones, traditional production methods and procedures are readily abandoned and replaced by improved ones, established types of business and industrial organization are displaced by different ones whenever management is convinced of the latter's advantages, and even the sacrosanct doctrine of *laissez faire* is consigned to the limbo of forgotten theories when combination promises greater returns than competition.

Any realistic approach to the study of human relations must take cognizance of the fact that the problems which develop in these relations are the inevitable result of changes in the nature, functions, and control of the units of production and distribution. The function of industry is a socially constructive one; it consists in the conversion of raw materials into finished products suited to human needs and designed to enhance the sum total of human satisfactions. Each sequence of processes in this task of transformation constitutes a branch of the manufacturing industry. The task of providing commodities for the satisfaction of human wants only begins, however, with the extraction of raw materials and their conversion into finished goods. The distribution of these goods is a gigantic task calling for the organization and operation of innumerable marketing and selling agencies, often referred to as "business functions" to distinguish them from "manufacturing functions." In other words, it is the function of industry to produce wealth; it is the function of business to distribute it. In this complex structure of economic organization, agencies of finance, transportation, and communication are indispensable. The nature of our economic structure has been succinctly described by Prof. L. C. Marshall as follows:

> Modern industrial society is . . . a bewildering complex, a literal maze of criss-crossing, interacting ranges of specialized plants, filled with specialized workers, machines and processes, reaching out to accomplish thousands of purposes. And this is but the beginning. All these ranges are criss-crossed and served by still other ranges of specialized functional middlemen, like carriers, bankers, insurance companies, or advertising agencies. All must, through social control and through the market, be welded into a balanced, want-gratifying machine, and woe is all society if the welding is seriously defective.[1]

This welding process, which Prof. Marshall regards as the indispensable condition of an orderly functioning of our economic society, is necessarily the responsibility of management. As we shall see in detail immediately, it is management's function to assemble, organize, and direct the agencies of production and distribution. The significance of this function is too seldom recognized and appreciated by employees, both within and outside of the ranks of union labor.

In the United States, during the third quarter of the nineteenth century, the process of integration in industrial organization made very rapid strides, and large-scale production, with minute subdivision of labor and specialization, became the general characteristic of our industries. In this modernized organization of industry and business four groups of interests appeared: owners or stockholders, directors, managers, and wage earners. Stockholders are only remotely responsible for the management of the enterprise and for the relations that exist between management and employees.

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[1] Marshall, L. C., "Incentive and Output," *Proceedings of the Annual Convention of Industrial Relations Association of America*, Chicago, 1920, p. 20.

The owners of shares operate through the directors whom they have chosen as their official representatives in the direction of the enterprise. In these days of widespread "proxy voting," stockholders exercise little authority and influence over corporation policies, and their interest is likely to extend no further than the limits of continued payment of dividends. Stockholders find it practically impossible to become conversant with the detailed workings of the factory, mill, mine, or mercantile establishment which they actually own and finance. Administrative functions are, therefore, beyond their reach. It is frequently urged that shareholders should assume some responsibility for the improvement of employment relations, but it is hardly probable that they will do more than assume a moral responsibility which will be exercised with a varying degree of effectiveness through the members of the directorate. Individual stockholders who have tried to influence employment policies have been voices crying in a wilderness of ineffectiveness.

This is quite understandable when one remembers that boards of directors are in the last analysis responsible for the formulation of general corporate policies and are supposedly accountable for the execution of those policies through the executives whom they choose to operate the business. In the administration of employment relations, it is often true that labor policies and conditions are left to the general manager, but in large corporations all general policies, including those governing labor relations, are determined by the board of directors. Moreover, the dominating voices in these matters are usually those of the most powerful members of the board, who often represent large financial interests. Seldom, if ever, are stockholders consulted in these affairs.

In companies of some size, the board of directors usually appoints a managing director or president who possesses supreme administrative control and is responsible to them for the success of the undertaking. A single individual may be president of several corporations, devoting only a part of his time to the affairs of each one and, therefore, not familiar with all of the difficulties and details involved in the operation of each concern. The managing director or president may personally supervise the work of a number of managerial officers or vice-presidents, or delegate most of his functions to a general manager to whom the principal executive officers are responsible.

For general administrative purposes an enterprise usually has a number of departments, such as production, purchasing, sales, and finance. Progressive firms are now adding the personnel or industrial relations department. Each department is in charge of a head who is responsible for its successful operation. Each unit or plant is under the direction of a general superintendent and assistant superintendents, below whom are numerous minor executives, foremen, supervisors, and subbosses. Naturally, administrative organization and the distribution of executive functions, together with the titles of executives, vary with different types of industries and businesses and even with different companies within the same industry and business.

Management and Its Functions.—Management is that part of the organization which coordinates, directs, and controls the activities of all other parts. In a very real sense, management is distinctly a profession of organizing and directing men, although this aspect is too often unappreciated and neglected. In its most comprehensive meaning, management is the organization and coordination of materials, machines, equipment, and men with a view to effecting the greatest possible measure of cooperation in the achievement of desired ends. No matter what type of social and industrial system may be developed in the future, management, in both its general and special functions, will always be indispensable. Industry will not manage itself. Management is successful when it makes industry efficient, and efficiency is measured concretely in quantity and quality of product produced with a minimum of human effort at the least possible cost. Regardless of beliefs to the contrary, administration cannot dispense with economy and efficiency. The coordination of human nature with machinery, materials, and equipment, with a view to their highest cooperative efficiency, must remain the major responsibility and function of management.

In its functional aspects, modern management no longer tends to be highly centralized in the hands of a single individual but rather is divided and specialized. The managerial units usually consist of: first, the corporate organization, which plans and finances the enterprise; second, the staff organization, which is concerned with the technical phases of the organization; third, the administrative organization, to which is delegated the duties connected with financing, auditing, accounting, and nonroutine matters; and fourth, the line organization, which has to do primarily with production, sales, and records.

The chief executive, who is the most prominent figure in modern industrial and business organization, is no longer a master mechanic and is seldom connected with the details of operation. Rather is he concerned with general practices and the correlation of departmental activities. Management, therefore, has become a specialized profession quite apart from the technique of production, and the manager is a specialist in the coordination of the functional elements of the entire organization. The staff, instead of dictating rules and methods from top to bottom, builds from the bottom up. There is considerable solicitation of the workers' cooperation, and they are encouraged to submit suggestions for improvement in processes. Planning and performance are specialized. One department makes an analysis of what is to be done; another plans how it shall be done; another gives instructions and sets standards of performance, piece rates, wages, and bonuses; another inspects, accepts, or rejects work; and, finally, the department of personnel hires and fires, readjusts wages, disciplines employees, and deals with other problems of labor relations. Work is planned ahead and dispatched in writing from the central office; materials, tools, and instructions are supplied ahead of actual operation; men and women are systematically selected, trained, and placed; standards of work and output, as well as of pay, are determined and scheduled by experts; and accurate production records are kept. The old general foremanship has been replaced by a functionalized foremanship built upon specialization. These are the characteristics of modernized organization.

Despite this seemingly complete organization of modern enterprises, progress in the administration of labor relations is disappointingly slow. In this connection, it has been appropriately observed that "notwithstanding the high degree of perfection which its technique has already developed, modern industry has failed to secure the good will of the workers and does not seem able to alleviate industrial unrest, probably because management by experts is a bureaucratic autocracy."[1]

Scientific Management.—It is not strange that the first attempts to apply the principles and methods of science to business organization and management should have been made in the mass-production industries of the United States and that, consequently, this country should have become known as the home of scientific management and mass production.

Americans have been the real pioneers in developing the science of management. As early as 1886, H. R. Towne emphasized the economic side of engineering, and in 1891 a premium plan was introduced by F. A. Halsey. The first systematic presentation of what is properly called "scientific management," however, took place in 1895, when Dr. Frederick W. Taylor read before the American Society of Mechanical Engineers a paper entitled, "A Piece Rate System: Being a Step toward the Partial Solution of the Labor Problem." Although the idea had been developing for 10 or 15 years, this was the first attempt to outline a method of fixing piecework prices by means of splitting a job up into its constituent parts and determining a time allowance for each part. Taylor's system of work, as we shall see in detail presently, involved the determination of all unnecessary efforts, the elimination of such efforts, and the reduction of human fatigue to a minimum.

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[1] Wera, Eugene, *Human Engineering*, p. 42.

Taylor's experience, first as a machinist, then as a gang boss, and afterwards as a foreman, had impressed upon his mind the fact that the average industrial worker was producing far below a good day's work. He thus sought to provide some incentive to increased quantity production by devising a differential bonus system giving increased pay for increased effort. To aid production further, he sought to improve the manner of performing the tasks by the standardization of tools and equipment, routing and scheduling, special training of workers in the most scientific ways of doing a job, the issuance of instruction cards, proper adjustment of the man to the job by careful selection and placement, proper management of stores, and the use of special job symbols.

Assuming that the interests of employers and employees are identical, Taylor believed that the principal object of management should be to "secure the maximum of prosperity of each employee." Such prosperity could come, he believed, only through the saving of energy, materials, and time; the elimination of waste; and the increase of the world's wealth resulting from greater productivity on the part of machinery and men. This is supposed to be accomplished in the following ways:

1. Separation of each operation into its elements. This is possible through study, observation, and experiment with unit times and motions, standardization of equipment and method, and definite instructions for the workers with regard to the best ways of performance.
2. Determination of a definite task, difficult of attainment, but possible of daily continuous performance, with conservation of the physical and mental health of the worker.
3. The proper routing of material and effort in accordance with determined standards and the provision of instruction by functionally operating and trained teachers.

4. Determination of standards of payment, assuring a wage considerably above the ordinary and giving a large reward for the attainment of the task and a definite loss for failure.

5. The elimination of waste material and effort, lost time, idle machinery, and unusable capital.

The development of Taylor's interest in the scientific organization of work and the equally scientific determination of pay is enlightening. As a young man in Philadelphia, he had made plans to enter the legal profession but found the realization of this dream impossible because of trouble with his eyes. In 1885, at the age of 22 years, he obtained work in the office of the Midvale Steel Company, but shortly he was transferred to one of the shop departments of the company. From the very beginning, he had evinced a keen interest in the organization and technique of production, with the result that increased responsibilities were placed upon him. As foreman, he later succeeded in arranging and scheduling work so that less time was lost and the output of the average worker was noticeably increased. He continued his efforts despite threats of harm from certain members of his work gang. His interest in efficiency was too deep to warrant abandonment in the face of such opposition.

In the midst of revolutionary changes in the organization and technique of production, Taylor saw the need for scientific planning which involved simplification and standardization. The wastes and inefficiencies of industry were obvious to him. He knew that, since the earliest days of modern industrialism, workers had been placed in jobs they could not fill competently because of inadequate or improper training. Placed under the instruction of an old operator, the new employee would be taught many inaccuracies as well as many accuracies of operation. This was the "rule of thumb" method of production, which prior to the coming of scientific management was traditional in American industry. Under this system any kind of worker was placed at any kind of a job and trained in any kind of a way, if at all. It allowed all sorts and varieties of tools to be used, followed the theory that labor must be driven to a point of exhaustion in production, and totally disregarded the influence of environmental factors upon efficiency. This system of work was built on the assumption that all an employee needed was time and he would discover the best ways of performing any task.

The onerous, if not impossible, duties assigned to the average foreman seemed to Taylor to be a principal cause of inefficiency.

The foreman was expected to be a good machinist, a rapid reader of blue-print drawings, and the agent responsible for planning work. Moreover, in most shops it was his duty to see that each man kept his machine clean and in good operating condition, safeguard quality production and assure quantity production, regulate the flow of work at the desired speed, oversee timekeeping and rate setting, adjust wage scales, and maintain discipline. Management failed to recognize the utter impracticability of this type of foremanship; the task was almost a superhuman one.

To escape from the shortcomings of traditional methods of operation, Taylor was convinced that management should assume at least four new responsibilities, as follows: first, develop a scientific method for each element of a man's work; second, scientifically select, train, and direct employees; third, secure the cooperation of labor in the effective application of these principles; and fourth, provide an equal division of responsibility between workers and management in the attainment of desired efficiency.

Taylor's fundamental problem at the Midvale plant was revealed in the questions he frequently asked himself: What should constitute a fair day's work? Is it what the management can drive the workers to perform? Or is it the minimum which workers can consistently get by with? A reliable answer to these central inquiries could come, obviously, only through careful studies of the effect of heavy labor upon individual workers. For years, Taylor had entertained the idea that there exists some causal relationship between the physical demands of a task and the length of time during which the worker could carry a full load in a given shift. Observation failed to establish any natural law governing these factors. Finally, Taylor enlisted the services of a competent mathematician, and soon something approaching a law was discovered. Almost all work, it was observed, consisted of heavy pulling, pushing, or lifting on the worker's arms or back. Consequently, for each given pull or push on a man's arms or back, it is possible for the worker to be under full load only for a certain percentage of the day. This was Taylor's point of departure in his concrete studies of the basis of efficient production.

During the years Taylor was connected with the Midvale Steel Company, somewhere between 30,000 and 50,000 individual experiments were carefully made, recorded, and analyzed. Between $150,000 and $200,000 was spent in this work, which involved such things as checking conditions of shafting; belting of machine speeds; shape, size, and temper of tools; requirements of jobs and the qualifications of workers. Fatigue was soon recognized as a determining factor in efficiency.

A single illustration will be sufficient to indicate the nature of the experimentation conducted by Taylor. When the Spanish-American War broke out the Bethlehem Steel Company solicited his assistance in the solution of a problem in the loading of iron in the company's yards. The company had 80,000 tons of pig-iron to load for shipment. Speed was imperative. Taylor arrived to find 75 men handling an average of 12½ tons of pig per day. His task was to increase greatly the average loading speed and reduce the cost of handling, at the same time keeping the workers contented. After several days of observation, Taylor selected a little Pennsylvania Dutchman by the name of Schmidt for experimentation in improved methods of handling and loading. Schmidt was slight of build, weighing only 128 pounds, but capable of doing hard manual labor. His pay under the old system of work was only $1.15 per day. Persuaded that he could make more money under improved methods of work, he consented to undertake the experiment. The other seventy-four workers were transferred to other jobs. Taylor coached Schmidt in the best and easiest way of picking up the 92-pound pigs of iron and loading them. Rest periods and complete relaxation were scheduled. At the end of the first day Schmidt had loaded not only the old average of 12½ tons of pig, but actually 47½ tons, and his daily earnings had increased from $1.15 to $1.85. Experiment had shown that for this type of work the laborer should be under full load for approximately only 42 per cent of the day. Adherence to this schedule, together with the application of improved methods of operation were responsible for the extraordinary differences in accomplishment.

This and numerous other experiments completed by Taylor yielded valuable conclusions.[1] First, the importance of proper timing and motion was apparent; second, the wisdom of careful selection and placement of workers so as to secure the right man for the right job was demonstrated; and, finally, the imperative necessity of a more equal division of work and responsibility between management and employees was established.

Expansion of the Taylor System.—Ever since Taylor gave great impetus to the discovery and application of scientific principles of work, scientific management has continued to expand. Although it is beyond the scope of our study to discuss the innumerable refinements that have been made in Taylor's system by his many disciples, it is essential to indicate the present general lines of procedure. Briefly stated, these are as follows:

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[1] For details of these experiments see F. W. Taylor, *Principles of Scientific Management.*

1. *Accurate, Objective Analysis.*—The present-day science of management begins with an accurate, impartial examination and analysis of all types of functions and activities in the industry or business under observation. In the factory, this means painstaking study of present conditions of operation, such as the type of machinery used, its speed, kind of tools available, arrangement of the production or work center, the flow of materials to and from a particular point, the working environment, the physical and mental requirements of the job, the factor of fatigue, wage scale and incentives applied, qualifications of the workers, and present and possible methods of performance. In the department store, it means close observation of all phases of the work and the present organization and execution of work from the time the employee reports for the job in the morning until she leaves for the day. Home life and home conditions are frequently taken into account. Research and experiment conducted in an objective manner, with careful discovery, recording, classification, and analysis of factual data, are obviously the first steps in the attempt to formulate scientific principles of operation.

2. *Establishment of Standards.*—Research and experimentation are only a means to an end—the establishment of scientific standards of work and workmanship for the enhancement of productive efficiency. Specifications must be drawn up with regard to proper quality of raw materials, goods in process, and finished products. Other standards must be set up governing such factors as methods of performance, tools, time, wage rates, requirements of the task, and qualifications of personnel. By the aid of such standards the uncertainty and guesswork of the old rule-of-thumb methods are eliminated.

3. *Maintenance of Standards.*—Once proper standards have been established, the next step in the expanded Taylor system is to provide effective ways and means of maintaining these standards until better ones are developed. Work must be carefully planned and executed. Records must be kept; materials, methods, costs, and personnel must be periodically checked; and performance must be analyzed in relation to the tasks that have been set. Mechanical means can usually be employed in checking materials, tools, and machines. The maintenance of standards in labor relations, however, is a more serious problem; the human element is a variable

one, and the best standards often break down because of this fact. An employee may react in a certain way one day, and quite differently on the following day. Conditions external to the plant, that is, in the home and community, or in the physical and psychological life of the worker, may upset the most carefully determined performance standards of the most astute efficiency expert. Laziness, indifference, antagonism, psychological inhibitions, misunderstandings, ignorance, or any one of innumerable factors may disturb the balance of labor relations.

With regard to the labor factor in production, scientific management makes an earnest effort to introduce desirable conditions of employment. It then proceeds to make a careful selection of employees with a view to their proper placement in jobs which they are qualified by intelligence, physical capacity, training, and experience to fill. Having done these things, an attempt is made to construct rates of pay and other necessary financial incentives in order to encourage the most efficient performance of the task in the least possible time at the lowest possible expense.

Opposition to Scientific Management.—Scientific management has had some rough sailing, and is still met with relentless opposition on the part of many employers and organized and unorganized employees. Employers have been skeptical of the merits of the Taylor system, and those who are responsible for industrial administration have been reluctant to admit that their organization and methods of management are inefficient. Frequently, general superintendents and lesser executives have been unwilling to have outsiders come in and make an analysis of operating technique. The reorganization of an industrial or business establishment entails considerable expense and effort. Even though such a step gives promise of greater efficiency and lower operating costs, inertia or self-interest often precludes scientific analysis and reorganization. It must not be forgotten, moreover, that numerous so-called "efficiency systems" have been installed by self-styled experts and have failed miserably. For these and other reasons, many efficiency engineers contend that some of the greatest opposition to scientific management comes from employers.

Relatively few workers are free from suspicion of all schemes designed to speed up production and lower operating expenses. The workers' opposition to scientific management has been given its sharpest articulation by organized labor. This antagonism is based upon several grounds. It is contended that scientific management is a scheme to increase the differential or profits for management and capital by increasing production, and in no way seeks to distribute among employees their just share of the product. Maximum production at minimum cost, not an equitable division of wealth, is regarded as the principal aim of these plans. A cardinal objection on the part of unions is that under efficiency systems complete control of wage rates is in the hands of management, thus destroying the democratic control which exists under trade agreements. Joint determination of wages, hours, and conditions of employment is the major purpose of unionism.

Experience has taught the workers that plans introduced under the name of scientific management have been used in numerous cases to speed up the workers excessively, often as an excuse for the application of sweatshop methods. Labor is usually unalterably opposed to all such "stretch-out" schemes, regardless of their merit. Moreover, because it splits the job into numerous units, scientific management results in minute specialization of tasks, thus destroying the possibility of originality and creative self-expression. This stifling of self-expression, which is a common characteristic of modern machine industries, is greatly intensified under efficiency systems. The workers are convinced, too, that by speeding up production the natural consequence is overproduction which results in increased unemployment. The most general source of labor's opposition lies, of course, in the fact that scientific management tends to eliminate the practice of collective bargaining, which has proved an indispensable bulwark for the workers against the unfair practices of exploitative employers.

Labor economists have often severely criticized scientific management. They contend that the whole system rests upon two inadmissible assumptions, namely, that there are natural and immutable laws governing industry and that the interests of employers and employees are harmonious and identical.[1] They maintain that no such natural laws of production exist, because the human factor is a variable that cannot be reduced to scientific precision and human reactions cannot be predetermined. Physcal and mental factors do not respond in the same way at all times. Men and women are free agents, and may consciously or unconsciously rebel against any rigid scheme of regimentation in production, thus affecting output adversely. Furthermore, because the employer is primarily interested in profits and the worker in wages, the interests of the two classes are to that extent antagonistic rather than harmonious.

[1] See Hoxie, R. F., *Trade Unionism in the United States*, Chaps. XII, XIII.

The validity of these objections does not concern us here, but they cannot be ignored in any discussion of personnel problems. For our purposes the significant fact is the existence of such powerful opposition from these several groups, particularly from employers and workers. Scientific management does standardize the job and the pay, thus tending to make unnecessary the joint determination of wage rates and precluding collective control of performance. This is the real argument of unionists against the movement. It does uncover conspicuous deficiencies in the organization and operation of plants, which undoubtedly is the major reason for the opposition of many executives. Few students of Taylor insist that a rigid natural law governs production or that there are no differences and conflicts of interest between employers and employees.

It cannot be gainsaid that greater precision and standardization are possible through the application of scientific principles to the organization and management of industry and business. Although scientific management as conceived by Taylor and his associates has not been so generally applied as its exponents have hoped, the contribution of this movement to the development of the intelligent organization and performance of work is unmistakable. Its shortcomings from the standpoint of the basic principles and methods of human engineering will appear as we analyze those principles and methods in the subsequent chapters of our study.

CHAPTER IV

PERSONNEL MANAGEMENT

The Inception of Specialized Management of Personnel.—Notwithstanding the existence of serious deficiencies in the application of the principles of scientific management as formulated by Taylor, the movement which he originated has contributed constructive suggestions for the development of a specialized science of administering employment relations. Taylor himself urged the necessity of developing a true science of management, introducing scientific methods of selection and placement, adopting systematic methods of employee training, and stimulating more intimate and friendly cooperation between management and men.

From the standpoint of personnel science, however, Taylorism was inadequate because it tended to place the major emphasis upon the handling of materials rather than on the proper administration of human factors. A specialized management of personnel has, therefore, been developed for the primary purpose of dealing with these neglected human forces in industry and business, seeking always that degree of coordination between mechanical and human elements which will not only result in the desired degree of efficiency but also assure the prevalence of equity in the whole scheme of employment relations. To the attainment of these ends, proper coordination of mechanical and human factors is indispensable.

It must not be implied that specialized administration of personnel relations had its origin in Taylor's principles of scientific management. Although it has come into prominence and achieved its greatest successes only within the last quarter of a century, scientific administration of labor relations, as distinguished from scientific management in the broader sense, had its beginning in numerous welfare schemes, which for an extended period of time had claimed the attention of humanitarian employers. Welfare work has been defined as comprising any plans and activities "designed to improve the social and intellectual status of employees, over and above the wages paid, which are not an absolutely necessary obligation of the industry nor required by law."[1] The substance of welfare work was present in the economic organization of the Middle Ages, in which the masters provided for the well-being of their workmen in a manner strikingly modern. In the guild system, for example, provisions were made for the adjustment of grievances, the care of sick employees, the training and education of apprentices, the determination of hours of work and workdays, and the adjustment of wages. In addition, there were established mutual benefit funds from which relief was paid in cases of poverty, sickness, old age, and unemployment.

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[1] "Welfare Work for Employees in Industrial Establishments in the United States," *United States Bureau of Labor Statistics, Bulletin* 250, 1919, p. 8.

In the wake of the industrial revolution, as we have seen, came the loss of intimate contacts between employer and employee. A differentiation of interests developed which soon affected adversely the relations of capital and labor. But even in the beginning of modern machine industry and factory life some employers realized the value of improving conditions of work. Foremost among such employers was Robert Owen, the originator of enlightened labor management, as he was of so many other progressive movements. In 1800, he took over the management or "government," as he called it, of New Lanark, a cotton mill built near Glasgow in 1785 and employing some 1,800 to 2,000 persons, including about 500 children. His policy was paternalistic and inquisitorial, just as most welfare plans tend to become even today. No phase of the worker's mode of life escaped inspection and regulation.

One of Owen's first acts was to enlarge and rebuild houses in the village. Every tenant was required to clean his house once a week and to whitewash it once a year at his own expense. The company enlarged the village water supply and cleaned the streets. It maintained its own police force. A voluntary company store was established. Owen bought at wholesale and resold at moderate profits to his employees, thereby underselling his competitors. He substituted goods of high quality for those of low quality. Thrift was encouraged; drunkenness and vice were extirpated. A fund for the relief of the sick, the aged, and the injured was subscribed to by all the workmen, who were required to set apart one-sixtieth of their wages for these purposes. The wage scale, however, was considered low. Voluntary thrift was encouraged partly by the company store and partly by the organization of a savings bank.

Owen accepted the new machine industry as a necessary agency in the creation of greater material well-being, but he recognized that the evils which issued from the factory system must be eradicated in the interest of general social welfare. An equitable division of wealth and the reconstruction of the social environment so as to make possible good character seemed to him to be indispensable conditions of a satisfactory community. Hence, the establishment, in 1809, of the "New Institute for the Formation of Character," with provision for lectures, dances, libraries, and other means of education and recreation, supported from profits earned by the company store. This broader social program was regarded as a supplement to, and not a substitute for, the improvement of employment conditions and relations. For example, in 1816, hours of labor were reduced from the prevailing 14 hours a day to 12 hours, with 1¼ hours off for meals. Owen found his welfare schemes very profitable.

Welfare work in the nineteenth century was not confined to the establishments managed by Robert Owen. Other philanthropic employers in England and on the continent established mutual benefit funds, introduced profit-sharing plans, and did various other things to alleviate the position of their employees.[1] In the course of the century the movement expanded greatly in the industrial countries of Europe, numerous schemes being introduced to help wage earners meet the exigencies of sickness, accident, old age, and unemployment.

In the United States, welfare work dates from the beginning of manufactures, being quite prominent in the textile factories of Lowell, Mass., in the early thirties. Even an operatives' magazine was introduced in 1837 under the title of "Lowell Offering." Most of these welfare plans were highly paternalistic and often proved a shield for otherwise undesirable conditions of employment. Moreover, the schemes appear to have been the result of a desire to attract much-needed workers, rather than an attempt to introduce equitable treatment of personnel. The American movement, therefore, was hardly comparable to the English and continental European development, which may explain the opposition to it on the part of the wage earners. Nevertheless, experiments continued throughout the nineteenth century and have been even more widespread in the twentieth.

The economic exigencies of the World War (1914–1918) served to accentuate sharply the need for enlightened personnel procedure and to stimulate a sincere interest in functionalized administration of personnel relations. Those responsible for the management of industry and business had long since been accustomed to the idea of functionalization, because in numerous enterprises specialized departments had been created to handle production, advertising, selling, purchasing, financing, and accounting. An almost unprecedented scarcity of labor and an extraordinary increase in the volume of production, both by-products of the conflict in Europe, were sufficient to enhance the value of the wage earner. A rapid rise in the cost of living and the customary failure of wages to keep pace with prices greatly stimulated industrial unrest. Labor's strategic position was revealed in the readiness with which strikes were called and in the spread of limitation of output. Employers were in a receptive mood for improved methods of handling personnel, and the federal government was quick to cooperate in encouraging the introduction of special courses of training for personnel managers. The expansion of specialized personnel administration during the war and immediately after was quite phenomenal.

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[1] See "Paper, Its Applications and Novelties," in *Dodd's Curiosities of Industry*, p. 3.

The business recession which appeared in 1921 and reappeared in more pronounced form in 1929 has had an adverse influence on the movement for progressive labor management. A revival of the vital character of the movement inevitably takes place under the auspicious circumstances of returning economic expansion, as the status of the movement during recent years clearly reveals.

Personnel departments are now found in practically every line of industry, commerce, and finance, as well as in such fields as education and civil service. The organizations in which the specialized administration of employment relations exists in the United States vary in size from 50 to 200,000, or more, employees, from single-unit firms to multiple-unit corporations. The soundness of intelligent, equitable management of labor has been demonstrated convincingly. Specialized departments of employment relations are now an integral part of the larger structure of all forms of administration.

The Indispensability of Specialized Administration of Labor Relations.—If one examines the general position of present day business, one soon discovers the reasons why specialized administration of human relations is imperative. As the industrial structure becomes more complex, relations between management and employees become more impersonalized. The old intimacy which characterizes the small enterprise disappears as the organization changes from the single enterprise and the partnership to the intricate structure of the large corporation, often integrated into a vast holding company. In the larger industrial and business units, delegation of managerial authority and responsibility is inevitable, so that those who own the enterprise and those who direct it seldom, if ever, come into personal contact with its technological and human problems.

Increasing division of labor and minute specialization of tasks tend to make jobs and occupations tedious and monotonous. Repetitious performance of the same detailed operation becomes, except for the subnormal worker, a source of severe nervous strain. Employees become restive, with resultant diminution of good will and efficiency.

Coordination of technological and human factors is now quite generally recognized as essential to the sustained operation of productive enterprise. The canons of science have been successfully applied to the mechanical forces of production. Standardization, simplification and planning are the cherished by-products of scientific management. It is not a far cry from the mechanical to the human forces in business, and the deepening insight into the science of human psychology has hastened the application of intelligence to employment relations. Machines do not operate themselves, and improved technological processes avail little in the absence of spontaneous and willing cooperation of the operatives.

Application of scientific method to human factors in industry and business soon reveals the incompleteness of the traditional form of organization. Production, finance, sales, and purchasing departments have long been recognized as necessary specialized agencies in the conduct of business enterprise. With the discovery of the causal connection between a cooperative working force, on the one hand, and efficiency and profits, on the other, functionalized departments of personnel administration are seen to be indispensable.

Through their collective efforts, implemented in the trade union, the workers have for over a century and a half directed the attention of society to undesirable conditions of employment, inadequate wage scales, excessive hours of work, and autocratic methods of labor administration existing under modern industrialism. Partly to meet the demands of organized employees, and partly to obtain public good will, employers often find it necessary to introduce improved standards of employment, wages, and hours and to develop progressive policies and methods of personnel management.

As already suggested, the inauguration of specialized personnel procedure is necessary to supplement the scientific organization and direction of the material forces of production and distribution. In the interest of peace, good will, and general efficiency in the enterprise, management often finds it imperative to evolve a special technique for the administration of human relations. The development of such a technique does not presuppose the relinquishment of the contributions of the old scientific management, but rather supplements them through the proper direction of personnel.

The Motivation of Specialized Personnel Control.—Like its progenitor, welfare work, personnel administration has been subjected to severe criticism, particularly by those who see in such administration an obstruction to the introduction of independent unionism and by those who fear it may retard the growth of revolutionary activity. The principal criticism against what employers, at least, regard as improved personnel procedure, is that its basic motivation is selfish and reactionary. As a matter of fact, the motives that have led to the inauguration of rather complete personnel programs are varied in nature and in importance.

Some employers, relatively few in number, have been actuated by a religious and philanthropic motive. Recognizing the doctrine of the universal fatherhood of God and the brotherhood of man, they have expressed great confidence in the applicability of the golden rule to industry and business. As a general practice, however, men do not allow their religious scruples to interfere with doubtful business practices, including inequitable treatment of personnel or the limitation of output.

In similarly rare instances, one finds that employers have introduced improved labor administration because of a desire to make industry "socially minded," a medium of developing constructive citizenship and increasing the material welfare of the community. The satisfaction which comes from general social prestige and social approval often prompts humanitarian labor policies, and sometimes they are prompted by an earnest desire to promote industrial and social progress. This was true of the Owenite movement. But on the whole, the inception of progressive personnel programs does not issue from such commendable social consciousness.

What, for the want of a better term, may be called a "psycho-philosophical" reason motivates some employers in the adoption of rather comprehensive schemes of personnel administration. Such employers have a desire, often amounting to an obsession, to prevent revolutionary changes in the ownership and control of industry and business. Employers who fear the invasion of independent unionism and collective bargaining hope by personnel procedures to forestall any attempts to interfere with their prerogatives to run their enterprises as they see fit. Others have deeply imbedded fears of the growth of socialism and communism with their revolutionary programs for the destruction of capitalism.

Personnel administration is regarded as an encouragement of conservative attitudes and tendencies.

Of all the motives to personnel activities, the economic one is the most powerful and general. This is the desire to give more in order to get more. It is generous because generosity results in friendly employment relations, the absence of serious conflicts, and the kind of cooperation that conduces to profitable enterprise. There are few cases in which this motive does not play a major part. The presence of the economic motive does not necessarily imply the absence of a sincere desire for economic justice. Nor should one conclude that there is anything illegitimate about such a motivation, since ours is essentially an acquisitive society. This is not a defense of the practice, which is all too common, of substituting charity for justice and sham democracy for genuine democracy in the control of employment relations.

The Requisites of Successful Personnel Management.—American experience indicates that personnel practices succeed only where and when there is adherence to certain well-defined principles of conduct. In the first place, as just intimated, personnel activities which are designed as substitutes for equitable wages, effective collective bargaining, and other fundamentals of sound labor policies will not succeed permanently. Wage earners are quick to sense selfish motives and hypocrisy in methods of administration. Unless a company's standards of wages, hours, and conditions conform to those prevailing in the community, the workers' reception of ambitious personnel activities will not be a cordial one.

A second principle of procedure is that there should be a preliminary educational program to acquaint the employees with the fundamental aims and methods of the proposed personnel organization. Workers are inclined to fear and suspect practices of management which they do not understand, especially when such practices have to do with employment relations.

No less important than the preceding conditions is the requirement of direct participation of the working force in the formulation and execution of the personnel program. Some system of joint representation is indispensable to continued confidence in any plan which involves the interest and welfare of the employees. Workers' participation in the creation and administration of labor policies invariably precludes misunderstanding and friction.

Finally, the attainment and maintenance of favorable labor relations are dependent upon the establishment of personnel departments and their functions as a permanent phase of general management. The most disastrous tendency in personnel procedure has been overexpansion of the personnel program in periods of business prosperity when work was abundant and labor scarce, followed by abnormal retrenchment when business depression set in. Curtailment of expenditures for personnel activities is a necessary and inevitable concomitant of business recession. The danger lies in excessive pruning of the personnel department's budget in comparison with allocations for other departments. Employees soon lose confidence in personnel activities which prove to be more or less transitory.

The Need for a Functionalized Personnel Department.—Standardization of mechanical appliances, plant design, and production methods makes it possible for practically all progressive and adequately financed business establishments to obtain equal advantages in equipment and processing. Prevention of plagiarization of patented processes is difficult. Even in the purchase of raw materials the differential advantage which one corporation enjoys over another is comparatively slight, except where extremely large-scale buying is possible. It would seem, therefore, that scientific administration of human relations offers the most fruitful source of differential advantage; that, in the last analysis, economy and efficiency must rest upon the intelligent organization and direction of human forces. Such organization and direction are tasks requiring the attention of a specialized department of labor relations.

Preliminary Steps in the Establishment of a Personnel Department.—American experience with personnel administration is a checkered one; the wreckage of personnel departments is rather thickly strewn along the pathway of our recent industrial history. Many have failed after an auspicious beginning. For the most part, the failures have been due to the neglect of certain fundamental principles of procedure. These principles may be summarized briefly as follows:

1. Management must be convinced that there is a definite and permanent need for a specialized department of industrial relations and that tangible benefits will accrue from such an addition to the structure of management.
2. The point of view of management in inaugurating a special department of personnel relations must be businesslike and not paternalistic or philanthropic.
3. The policy of the personnel department, as well as its probable future development, must be clearly defined to executives and employees, upon whose cooperation the successful realization of the personnel program necessarily depends.

4. A competent personnel manager must be selected, who in turn should be made responsible for the building up of an efficient staff in the personnel department.
5. It is the part of wisdom to refrain from excessive praise of the new organization and its procedures until actual achievements warrant commendation.
6. The conduct of the new department of personnel must always be frank; secrecy and duplicity have no place in such a department.

Because personnel activities are permeated with human interest and prejudice, the inauguration of a personnel department, in many instances, is attended with greater difficulties than the development of almost any other phase of management. The reasons for this are numerous. However frankly men may acknowledge their limitations in dealing with material and mechanical forces of production, few are willing to admit any inability to judge and manage their fellow men. All executives pride themselves on their ability to understand and control human nature. Even when employers or managers are honest enough to grant that they cannot expertly control the working force, they are seldom willing to admit the need for a specialized department of human relations. This is because they fear the loss of authority and power which may follow the recruitment of new employees through a specialized employment department.

Minor executives are unlikely to ascribe to the personnel department any better basis for recruiting, placing, and handling employees than they themselves possess. So far as training is concerned, they insist that they are much better equipped to train men than is any specialized training division of the employment department.

Not infrequently the introduction of a specialized department of industrial relations is retarded, if not prevented, by the extremely conservative attitude of certain members of boards of directors, who either regard such a procedure as too radical a departure from established practice or fear the potential consequences if workers' rights are clearly recognized.

Essential Nature of the Personnel Job.—Fundamentally, the personnel job consists in giving sufficient attention to human forces in industry to assure their mobilization for effective operation. Industry and business are viewed as the joint enterprise of capital and labor; mutual advantage rather than exploitation is sought, and spontaneous cooperation is desired.

Responsibility for the personnel job rests primarily upon management, that is, upon the shoulders of the chief executive and his assistants. The task of the personnel manager is basically an advisory one; he is chief counsellor to executives in all matters touching human relations. Since the human factor is the main agency through which all the processes of production are carried out, the head executive does not release his control over personnel policies and functions. He merely delegates his responsibility in these matters to a specialist who knows the industry, is familiar with the problems of the working forces as well as with the problems of management, understands clearly the objectives of the company's program of labor relations, and appreciates the needs and desires of the workers. The personnel job, then, is not separable from other jobs, since problems of personnel exist in every department and employees are linked up with every phase of the enterprise.

The Meaning of Functionalization in Personnel Management.—As set forth in our discussion of the science of management (Chap. III), the general executive is essentially a correlator. It is his business to define the general aims and purposes of the enterprise and to harmonize with these all lesser and incidental policies. His task of coordination requires the assistance of specialists who concentrate their attention and effort upon particular phases of the enterprise, and who at his request provide him with standards and more effective methods of advancing the organization. The function of staff departments is thus clearly recognized in technical matters. When the chief executive desires a plant, he depends upon an architect to design the buildings that will meet his needs; when he desires a new product, the research or designing department is at his command.

This principle of staff organization and service is now being carried over into the field of human administration, because there is general recognition of the indispensability of competent, cooperative employees. Specialization of function is, however, just as essential in the control of human relations as it is in the manipulation of mechanical and material forces. One of the important results of scientific management was that it called attention to the absurdly wide range of functions which the average foreman was obliged to perform. He was expected to hire men, set their wage rates, and discharge them; find work for men and machines from hour to hour; recommend equipment for the shop; keep machines and equipment in repair; give an offhand opinion as to when an order of work would be completed; determine the cost of stock maintenance; preserve discipline; and furnish the general office with records as required. The Jack-of-all-trades was master of none, with the usual result—inefficiency. Proof of this was found in machinery operated at low percentage of capacity; time lost in hunting tools; waste of stock; delayed deliveries; and inefficient, discontented workers, who frequently aired their grievances in strikes and other forceful ways.

The remedy for such a situation was found in functionalization. This means simply that groups of related duties are put in charge of staff or service departments, such as the stockroom, the planning room, the tool room, and the designing department, an engineer in charge of repairs, and an estimating department. In conformity with this conception of functional division of labor and responsibility, there has been introduced in many enterprises a department in charge of supervision and general administration of employment relations. Thus, the foreman is relieved of many onerous duties. Where this change has been made, he is no longer a "bouncer," no longer sells jobs, practices nepotism, or holds his favorites in "soft" positions. Where there is a specialized department of employment relations, he does not have the easy device of covering up his own incompetence by firing a man but must suggest a transfer, which may prove that the worker can be efficient in another shop or department under different supervision. Moreover, he gets a more even run of dependable employees from the employment division than he himself could provide. He is now free to devote himself to the technical requirements of production, whether the plant is making a commodity or providing a service.

Line and Staff Organization in Personnel Management.—The development of functionalization has led to considerable reorganization of the structure of industry and business, with the result that the administration of personnel has been greatly modified. Under the old military type of organization, it will be remembered, authority flowed directly from the chief executive or head to various subbosses or minor executives, and through them to the employees of the rank and file. Such a type of organization, often referred to as the "straight-line" form, makes possible direct managerial control, is definite and exact in matters of authority and discipline, and economizes expenses of administration. It achieves its greatest efficiency in the small enterprise. From the point of view of scientific management of labor relations, this type of organization has many disadvantages. It imposes far too numerous and varied duties and responsibilities upon foremen, gang bosses, branch managers, office supervisors, and other minor executives. Technical specialists are required to do many things for which they have not the inclination, time, preparation, and ability. Lacking expert advisers on these matters, they are forced to rely on their own resources, with a consequent loss of time and effort.

Because it is fundamentally a service division, the personnel department cannot operate successfully as a line organization. It must function for, with, and through all the other departments. Structurally, the personnel department can be, and often is, independent of other major departments. Functionally, however, the activities of this department cannot be isolated or departmentalized. The administration of employment relations is a general function, the successful execution of which must depend upon the cooperation of all persons to whom executive or supervisory duties and responsibilities are delegated. Such procedure is fundamental to the formulation of sound personnel policies and the coordination of all personnel practices. The personnel department, therefore, is best organized on a line-and-staff basis and should be a major staff department. Like all other departments under this type of industrial and business organization, the personnel department has in its principal positions skilled specialists.

In companies in which the personnel department is a major staff organization, its responsibilities and authority are definite and fixed. Instructions and directions issued by it are accepted and observed by other departments which are coordinate with it, exactly as though the orders had come directly from the chief executive or any other person in authority and control. Only where the authority of the personnel department is thus regarded as supreme in its field is there likely to be successful administration of industrial relations.

The staff control by specialists which prevails under a line-and-staff organization does not, of course, dispense with the direct control of line members. The direct "line" flow of authority from the chief executive downwards still obtains. In other words, no department is or can be left a law unto itself to exist as a separate entity. Such independence would preclude necessary coordination. The personnel department is no exception to this rule. The manager of employment relations is responsible to the chief executive alone, which makes the department coordinate in responsibility with all other departments. The line of authority is unmistakably clear and definite. The personnel manager, as a staff expert, is adviser to the chief executive on all matters involving employment relations. The successful accomplishment of his staff functions, however, necessarily brings the head of the personnel department into daily contact with minor executives, whose routine duties involve the management of rank and file upon whom the ultimate responsibility for the application of personnel policies must rest. Within the personnel department itself there are, of course, many line functions to be administered by the manager of industrial relations.

Coordination with Other Staff Departments.—Coordination of the activities of the personnel department with other functionalized departments, such as finance, sales, traffic, office, production planning, and purchasing, is an indispensable condition of effective operation. It is from these that the personnel department must often obtain data essential to the formulation and application of its policies. For example, it would be impossible for the personnel department, functioning independently, to determine practical policies governing wages, hours, and safeguards against accidents These policies must be related definitely to the facts and experiences of production. Communication between all departments and the department of personnel relations, therefore, must be freely maintained, and mutual confidence and cooperation established With regard to this matter, it has been appropriately observed that the personnel department "must work helpfully and understandingly with the other departments, without pride or arrogance But it must work unceasingly with clear vision toward the goal of making its distinct contribution to the company's prosperity through improved human relationships which it may help to develop."[1]

It is obviously not sufficient that the personnel department shall be a model of system and efficiency within the confines of its departmental organization. It must equip and train itself to a point where it becomes the logical agency for handling relations between management and men. The execution of such a responsibility must, however, necessarily be implemented through the heads of operating departments. That is, the personnel department is essentially a counseling and service department, upon which reliance is placed by management for cooperation with all other departments in the general program of production.

Such interdepartmental cooperation can be assured. In a number of organizations, there is a weekly conference of department heads for the purpose of considering common problems and interrelated activities. Such conferences, moreover, are often convened at the convenience of the principal executive, or in times of emergency. In these and other ways, the unity and balance of operating policies are assured, friction is reduced to a minimum and a basis of sustained efficiency is established.

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[1] Hopkins, E. M., "A Functionalized Employment-Department as a Factor in Industrial Efficiency," *The Annals of the American Academy of Political and Social Science*, vol. 65, May, 1916, p. 75.

Correlation of Policy.—The specific benefits which accrue from a closer coordination of the functions and activities of the personnel department with those of other departments are not difficult to apprehend if one keeps clearly in mind the functional relationships which necessarily exist among the several departments of the modern business enterprise. Coordination is frequently effected along such lines as the following:

1. *Labor and Production Policies.*—The necessary relationship that obtains between production and personnel policies is obvious to the most casual observer of industrial enterprise. Scientifically planned, scheduled, and routed work is fundamental to sound personnel practice. Broken, interrupted, and irregular operations are conducive to discontent. This is particularly true of pieceworkers who, if they must wait for materials or are required to perform operations not included in the specifications governing their tasks, immediately become impatient, are incensed with the management, and sometimes leave the service of the company. A poorly planned production department invariably reflects its make-up and operation in low-grade, indifferent craftsmanship and a high rate of labor turnover. This is a serious matter in the case of highly skilled operatives who are not easily replaced.

To avoid friction, methods of wage payment and other important elements in the relation of the worker to the job are often determined jointly by the production and personnel departments. The amount and form of payment, the manner of arriving at final rates, the procedure of adjusting rates to meet changed conditions of production, and other incidentals in the remuneration of workers are considered by both departments. Additional lines of coordination include the making of time, motion, and fatigue studies; safety work; job analysis and job description; selection and placement of personnel; technical training programs; promotion and transfer; discipline and discharge.

2. *Labor and Sales Policies.*—The interdependence of the personnel and the sales departments may not be very apparent, yet close observation will reveal an intimate relationship between them. The reduction or elimination of wastes resulting from seasonal variations in production and employment is, to a large extent, a responsibility of the sales manager. Unnecessary losses of time and considerable misdirection of energy result from attempts to

adjust production to the fickle whims and trends of the commodity market. Stability of production and employment is more effectively advanced by the continuance of staple products to which the market invariably readjusts itself.

There are common sense and good business judgment behind the tendency to have sales policies jointly determined and controlled by all departments. Experience shows that the sales department frequently dictates to other departments. The whole organization is likely to be plunged into a frenzy or lulled into a paralysis of production by the spasmodic activities of the sales force. Anarchy of production and unstable employment may result. On the other hand, the adjustment of sales policies and activities to the arbitrary determination of the production department, which may not be sensitive to the changing requirements of the market, is not good business. The wisest course lies in the direction of coordination. When sales policies are agreed upon by interdepartmental conferences, correlation of production and sales is made possible, with the consequent avoidance of rush orders, irregular employment, excessive overtime, and increased production costs. Regularized employment depends upon regularized production, and this in turn hinges on consistent development of the market.

3. *Labor and Purchasing Policies.*—Efficient, sustained production depends as much upon the competent purchasing of raw materials and equipment as upon intelligent planning, scheduling and routing. Inadequate equipment, worn-out machinery, antiquated methods of production, poorly lighted offices and workshops, lack of supplies, and scarcity of good tools contribute to discontent and poor workmanship. Frequently the personnel department is able to assist in the avoidance of these conditions by close cooperation with the purchasing department. The personnel department is in a position to present statistical evidence of the influence of a well-defined purchasing policy upon smooth production and industrial good will. On the other hand, the purchasing department can obtain helpful assistance from the personnel department in promoting careful and economical use of materials, machines, equipment, and tools. Such cooperation reduces production costs, which are the basic factor in meeting the price requirements of the market, thus assuring steady sales and stabilized employment.

4. *Labor and Financial Policies.*—The condition of the balance sheet of any corporation greatly affects the interests of the employees, since it reflects the probability of continued employment. On

the other hand, the condition of the balance sheet itself depends in no small degree upon the employees and the whole administration of the labor force. The failure of important concerns to pay regular dividends and the resultant demotion of their securities from Class A to Class C rating is often attributable to unwise labor policies. A financial department which is inefficiently managed and financial policies that are determined without reference to labor costs invariably result in curtailed operations and reduced employment. Unsuccessful personnel policies, mismanagement or poor management of labor, on the other hand, just as surely result in adverse effects upon credit and finance. This is important in view of the fact that investment bankers invariably take cognizance of labor relations in determining loans. Industrial good will is quite generally acknowledged to be a banking asset.

Modern wage earners are taking an increasingly keen interest in the earnings and net profits of corporations. This is especially true of unionized workers. The research and statistical departments of progressive trade unions keep a watchful eye on the balance sheets and financial operations of firms in which their membership is vitally interested. Such data are essential in the intelligent consideration of wage adjustments and other improvements in labor standards. Similarly, corporations find it necessary often to present facts concerning their financial status in order to create confidence, forestall unreasonable demands by employees, and prove the necessity of wage reductions.

Watered stock, large undivided surpluses, high rates of depreciation, large dividends, and high executive salaries, all of which have periodically been revealed in Congressional investigations and, consequently, given the widest possible publicity, have a marked influence on labor's attitude. In view of such conditions, the workers regard as quite legitimate their demands for a living or a saving wage and other improvements in conditions of employment. Unfortunately, workers obtain secondhand their information about corporation finance, not infrequently from the soapbox orator or the radical section of the labor press. A simple, accurate statement of financial affairs given by the company itself to employees through the personnel department should prove an effective answer to the misstatements and exaggerated presentations of the professional agitator. A sobering effect also results from the policy of giving workers accurate information about the amounts of outstanding stock, unpaid bonds, size of replacement and depreciation funds, reserves, surplus, and methods of computing fixed charges and net income. Such procedure is equally valuable for profit-sharing and nonprofit-sharing firms.

The Status of the Personnel Department.—Personnel departments vary greatly in authority, responsibility, and efficiency; they range from the many which are nothing more than hiring or labor clearance offices, interested only in supplying workers for jobs, to the relatively few which have well-rounded programs of a highly developed character and a correspondingly developed organization with clearly defined functions. The organization and functions outlined in the chart on the opposite page are representative of the best, and are not typical of the average personnel department.

Maturity and experience are constantly bringing modifications or abandonment of old principles and practices and the addition of new ones; each company gradually evolves the type of personnel organization and procedure which best meets its own needs. Flexibility is an indispensable condition of sound development. There is no such thing as a perfect personnel organization and there can be none, because there is no finality in the principles and methods that have to do with the human equation in industry and business.

The General Functions of the Personnel Department.—It must constantly be borne in mind that the personnel department is merely the medium through which the general management functions in the administration of human relations. Decisions involving labor relations flow from the chief executive through this department to the heads of the various other departments, who in turn pass them on to their subordinate operating officials for application. In the final analysis, these operating officials are the real personnel managers. On this point, an experienced executive appropriately observes:

> However, though personnel experts are invaluable as staff advisers, it is the line executives who are the real captains of our human management problems. If the concept of modern and scientific human organization is to become woven into the scheme of our business life, it must become a matter of first importance in the minds of these executives. It must not be regarded by them as a fad or fancy, or as frills, but as a major part of their job. These executives are, after all, the influential factors in determining the day in and day out routine of factory operations and in conducting our financial, sales, and office departments. They must be entirely convinced ("sold" if you will) of the importance of these matters before real progress can be made on a large scale.[1]

[1] LEWISOHN, SAM A., "Purpose, Progress, Plans," *Presidential Address*, American Management Association, New York, 1925, p. 3.

The principal duty of the personnel director is to see that the labor policies formulated by those higher in command are properly executed by line executives, and to give advice and assistance whenever these are needed. The chief responsibility of the personnel department as a whole is to coordinate all policies and activities affecting employment relations. Viewed more specifically, personnel departments undertake to do the following things:

1. Formulate principles of procedure and develop a technique for the proper recruitment, selection, and placement of employees.
2. Collect information concerning the requirements of every job in the organization and make the specifications that are required for intelligent placement of personnel in those jobs.
3. Draw up a set of rules and practices for the promotion of health, comfort, and safety of employees.
4. Stimulate interest in the job and the enterprise.
5. Cultivate good will through joint conferences between management's representatives and the representatives of the employees concerning physical conditions of work, hours, and wages.
6. Encourage division of ownership through stock distribution among employees of the company.
7. Develop adequate opportunities and facilities for executive and employee training.
8. Construct systems of transfer and promotion.
9. Create machinery for the hearing and adjustment of grievances.
10. Formulate a general code of rules for shop conduct and discipline, and provide a plan of handling dismissals which will assure justice and safeguard the interests of the company and the men.

The successful execution of such duties in a large concern requires a personnel department which is itself organized with several functional divisions. A complete personnel department has the following divisions: (1) *employment;* (2) *health, safety, and sanitation;* (3) *education, training, and research;* (4) *welfare; and* (5) *joint representation.* Both structurally and functionally, several of these divisions are often integrated under one head, but in some cases further decentralization prevails than is indicated here. The organization and responsibilities of any personnel department must necessarily be adapted to the needs of the particular enterprise.

Interrelation of Functional Divisions.—In actual operation, the administrative divisions of the personnel department are not so sharply defined or differentiated as our outline might imply. Usually, there are fewer divisions and a consequent combination of functions. Specialization is, however, very necessary in the larger enterprises. Those in charge of employment are not often successful in dealing with problems of health, sanitation, safety, and education. These are special fields requiring specially trained experts.

Cooperation within the department of industrial relations is as necessary as cooperation between the various departments. The employment division has a primary interest in job analysis and specifications, wage scales and incentive systems, cost of living data, and trends in personnel practice, which are provided by the research division. The health, sanitation, and safety division is vitally concerned with the type of men and women who are recruited for jobs, since sickness and accident rates depend upon the physical and mental qualities of employees and always bear a definite relation to the personal factor. The work of the education, training, and research division is of great importance to all other divisions, because labor turnover, health, safety, and wage rates have a direct relationship to the degree of intelligence, information, and skill among employees. The joint representation division seeks through conference to effect an amicable adjustment of grievances and to formulate constructive programs of expansion in personnel practice. Thus, its work is to facilitate the operations of all other divisions.

Whether or not a company is large enough to warrant a comprehensive organization in charge of personnel, the functional activities are nonetheless essential to the maintenance of that unity and balance which determine profitable enterprise. Where the structure of the personnel department is an ambitious one, there is need of the same unity and balance among the functional divisions as are expected to characterize the operation of the enterprise as a whole.

CHAPTER V

THE RISE OF A NEW PROFESSION

Reasons for the Employment of Special Personnel Executives.—In the preceding chapter, it was suggested that one of the principal sources of industrial grievances is the practice of entrusting the administration of employment relations to production executives who also are responsible for manufacturing operations, output, and costs. It was also suggested that there is an increasing tendency for corporations to employ a general officer whose sole responsibility is the supervision of all policies governing the relations of the management to employees, and who in progressive firms is accorded a position of dignity equivalent to that enjoyed by other staff experts. There are a number of reasons for this tendency to employ specialists in personnel relations.

1. *The Desire to Assure Adequate Attention to Personnel.*—Experience has proved repeatedly that whenever the administration of human relations is assigned to executives in charge of production, neglect of such relations is almost inevitable. This is not due to any malice aforethought on the part of executives. In every plant production executives are concerned primarily with problems of output and cost. Administration of labor is incidental to these matters. This is not strange, since such executives are held responsible for uninterrupted output and the greatest possible production at the lowest possible cost. Production schedules must, therefore, be maintained. When emergencies arise which threaten interruption or shutdown, manufacturing processes must receive immediate attention. Because labor costs and other expenses go on just the same, anything which interferes with production schedules must be attended to promptly.

It is quite natural that production executives should prefer to devote their time and energy to the improvement of machinery, methods, and processes of production because these will have an immediate and tangible influence upon larger output and lower costs, for which due credit will be received. No such immediate and definite results appear to accrue from improvement in employment relations where the beneficial effects upon output and costs are less tangible, even if they are no less real.

This concentration of attention upon problems of processing, scheduling, routing, and other technical matters identified with production, to the almost total exclusion of thought to problems of human relations, invariably has a negative influence on the reaction of the workers to the general program of production. Workmen seldom respond generously to demands for increased output, elimination of waste, and reduction of cost, if management manifests no concern in the well-being of employees. Only reciprocity of good will can assure the degree of co-operation that is essential to efficient operation. The cultivation of good will requires time and thoughtful attention; it is one of the major responsibilities of the personnel executive.

2. *The Necessity of Safeguarding Long-run Interests of Management and Employees.*—Because immediate efficiency is the primary concern of production executives, they frequently condone, if not actually initiate, practices which in the long run tend to have a demoralizing effect upon employment relations. For example, piece rates are cut in order to secure an immediate saving in production costs, although experience everywhere indicates that such a step invariably destroys incentive, curtails output, or increases costs. Again, the old "drive" methods are employed because they tend to an immediate speeding up of production, although they always result in a rapid exhaustion and fatigue of the working forces, kill the spirit of spontaneous cooperation, and make it extremely difficult to recruit a desirable type of new employees. Low wages are introduced, although it is a known fact that decent wage standards are more conducive to sustained output.

The personnel manager's vision extends beyond immediate results; he perceives the ultimate adverse effects of inequitable treatment of the rank and file. That is why he opposes undesirable changes in employment standards and constantly strives to inaugurate desirable ones. For instance, when an inconsequential change is made in the technique of a job merely as a smoke screen for a radical reduction in the piece rate or time wage, the personnel manager who is worthy of his profession frankly points out the negative results that invariably attend such a dishonest policy.

3. *The Need for a Balanced Emphasis.*—Each industrial and business unit of any considerable size is a complex network of specialized functions, and the judgments and decisions of those in managerial positions are determined by their specific interests. Sales manager, purchasing agent, auditor, advertising manager, comptroller, production manager, department head, chief engineer, the sub-boss,

each has an exaggerated conception of the value and superiority of his own job. Consequently, each executive is often quite unable or unwilling to judge fairly and appreciate fully the importance of the other fellow's task. The smooth and effective operation of any enterprise requires that there shall be a balanced emphasis of interests and objectives. This means that the functions of each department shall receive due but not exaggerated recognition, and that human as well as material and mechanical factors shall receive proper attention. The encouragement of a balanced emphasis is among the many duties of the personnel manager.

4. *The Desirability of Centralized Control of Human Relations.*—Sad experiences have demonstrated to many employers the desirability and wisdom of centralized control of industrial relations. Acceptable labor standards do not create themselves; their formulation and application require education and experience of a special kind. The specialist in personnel administration is familiar with progressive labor policies and practices throughout the country. It is his business to educate factory managers, foremen, and subbosses in the successful ways of managing men. This means that he must be authorized to scrutinize the methods which these executives adopt in handling employees and be free to suggest, wherever necessary, improved ways and means. Decentralized control of labor standards is responsible for the inconsistencies and inequities which so often cause friction. The remedy lies in integration of authority and power in the hands of the personnel manager.

5. *The Need for Interpretation of the Workers' Point of View.*—Management's ignorance of the psychology of the wage-earning class is notorious. The average employer in an industrial dispute manifests an appalling ignorance of the basic philosophy and psychological motivation behind the labor movement. His idea of the radical implications of unionism is usually a gross misconception; he sees red and revolution in every strike and boycott and obstinately refuses to examine dispassionately the possible causes of discontent. His conscience is invariably eased by his readiness to attribute all unrest among his employees to the activities of the "outside agitator." His is an attitude of "Management can do no wrong." Not only does he fail to understand the philosophy and psychology of the working class, but he underestimates their general intelligence and the intelligence of their leaders. So unfamiliar is he with the deeper motives and aspirations of his employees that he fails to comprehend why welfare work and benevolent paternalism do not suffice to make them content and efficient. In this particular, he

forgets, if he ever knew, that what the wage earner wants is not charity but justice. Conscious of their shortcomings in these several particulars, many employers have added to their general staff a personnel executive whose duty it is to interpret to major and minor executives the larger implications of the labor movement and the developments in the field of personnel management.

6. *The Necessity for Eliminating Old Prejudices and Fallacies.*—Employers and the executives who represent them in the administration of an enterprise often have antiquated notions of plant discipline. No one familiar with the operation of an industrial or business establishment will deny the necessity for discipline. On the other hand, few impartial observers will admit the wisdom and justice of the disciplinary tactics of the old-fashioned workshop in which force, autocracy, and threat of discharge are relied upon to make petty regulations effective.

In the old-fashioned establishment, it is a common practice to uphold the decisions of foremen and other minor executives in matters of discipline regardless of the possible existence of error in judgment on the part of such subordinate officials. Unjust discharge is frequently the lot of the wage earner in such an establishment; he has less opportunity to present his case to impartial adjudication than did the serf of the Middle Ages. With the addition of a personnel manager skilled in the art of handling grievances and complaints, the channel between management and workers is opened and decisions of minor executives are subject to review.

7. *The Need for Developing Personnel Technique.*—Successful maintenance of the desired unity and balance in employment relations impinges at one point or another upon the development of adequate knowledge and effective methods. Systematic records, specialized forms, and definite types of organization and procedure have been evolved by various corporations in an effort to guarantee effective administration of personnel. Personnel managers themselves in special conferences are constantly comparing principles and methods of procedure. Experiences are exchanged and agencies for mutual assistance are created. The application of this special technique to particular establishments requires the constant attention of a specialist in personnel management.

The Personnel Manager's Difficult Task.—The responsibilities and duties of the personnel manager, many of which have been suggested in the foregoing pages, are onerous and difficult. This is due partly to the fact that he is dealing with the least amenable of all the forces in production, namely, human beings, and partly to the necessity of recognizing so many different points of view and such widely divergent interests.

1. *Relation to the Management.*—The personnel manager's primary obligation and responsibility is to management. He is employed, paid, and controlled by the employer, who often looks upon the inauguration of a personnel department as an interesting, but doubtful, experiment. Because the results of improved personnel procedure so often are difficult to measure in terms of dollars and cents, it is not an easy matter to demonstrate quickly the advantages of new methods of labor administration. Nevertheless, management expects from the personnel director fairly conclusive evidence of the economic benefits that accrue from the department's activities. Innovations in personnel policies and practices generally originate with the personnel officer, but they must have the sanction of the chief executive. The continuance and expansion of the personnel program must also depend upon the approval of the chief executive. For these reasons, one of the principal duties of the personnel manager is to establish and maintain cooperative relationships with the head of the enterprise.

2. *Relation to Operating Officials.*—In the earlier pages of our discussion it has been pointed out more than once that the practical application of personnel policies is in the last analysis the responsibility of operating officials. Without the cooperation of the men who occupy supervisory positions in the establishment, the successful operation of the personnel department would be impossible. It is for this reason that every personnel director finds it imperative to create harmonious relationships with the superintendent, department heads, foremen, and lesser executives who contact the working force day by day. Once the personnel department loses the confidence or fails to obtain the cooperation of major and minor executives its days of effective work are numbered.

3. *Relation to the Rank and File.*—The chief executive and operating officials may approve particular policies of personnel administration, and yet the application of such policies may fail because of opposition on the part of the rank and file of employees. Cooperative relationships with the wage earners are not always easy to establish, for the simple reason that workers are frequently suspicious of the whole personnel program. Not infrequently the personnel director faces the necessity of convincing employees that he is not a "company man" devising subtle schemes to make them more efficient, tractable, and acquiescent, but rather that he is a genuine representative of human interests in the plant and, as such, is the

guardian of the physical, mental, economic, and social well-being of the workers.

Wage earners have to be reassured by the test of experience that the personnel manager is an honest, sincere, and faithful advocate of fair treatment. Duplicity quickly destroys the confidence that is essential to cooperation. One of the most promising personnel departments we have known was short-lived because the workers discovered that the personnel manager had deliberately lied to them with regard to the financial status of the company. The personnel director had made a strong plea for the acceptance of a 10 per cent reduction in wages, explaining that unless this was done the company could not afford to operate with the full force and many men would have to be laid off. The facts were that the company had amassed a large surplus in the more prosperous years, did not face the exigency of curtailing production to a very marked extent, and only recently had declared an extra dividend on its common stock and increased the salaries of executives 25 per cent. The wage earners who had agreed to the reduction in their remuneration naturally resented such misrepresentation of the true situation of the company.

4. *Relation to the Community.*—Corporations are finding it increasingly necessary to establish a public relations department for the express purpose of enlisting the good will of the community. No phase of industrial management is used more successfully for this purpose than the administration of employment relations. A company known by precept, policy, and practice to deal justly and liberally with its workers is assured of an unusual amount of community good will. A great many corporations regularly run feature advertisements in the daily newspapers describing their personnel policies and practices, especially those involving wages, promotion, profit sharing, employee stock ownership, and mutual benefit plans.

At the outbreak of a strike or the initiation of a lockout, the first thing many large corporations now do is to try to capture public sympathy through newspaper advertising setting forth their side of the controversy and their general labor policies. Both in periods of strife and during periods of peaceful relations, personnel managers are called upon to address various bodies in the community concerning personnel activities. Moreover, when unsanitary and immoral conditions in the community constitute a degenerating influence on the working force, it is often the duty of the personnel director to represent the company in the campaign for a cleaner and better community.

The Status of the Personnel Manager.—In the United States, as in other countries, the official status of the personnel director varies considerably. It is still true that the head of a typical personnel department finds his authority confined to employment, welfare work, safety, sanitation, medical service, and recommendation for transfer and promotion. He has little or no authority with regard to other vital matters of employment relations, such as the formulation of policies governing wage rates, the handling of employees by foremen, hours of labor, grievances, discipline, and discharge. He is consulted in these matters only as a subordinate adviser to major executives who make the decision, that is, the plant superintendent, general manager, president, executive vice-president in charge of personnel, or some other official.

Recent years have witnessed considerable modification in policy with regard to the authority and power of the personnel director, especially in the larger companies. The tendency is to enlarge the scope of his authority and power and to hold him absolutely responsible for what happens. That is, his authority and power are becoming commensurate with his responsibility, as they should be. Merely conferring the title of personnel manager on a clerk does not make him one; nor is genuine personnel administration confined to the hiring and placing of employees. In progressive firms, the personnel manager takes an increasingly important part in the determination of changes in wage rates, wage increases and decreases, hours of labor, conditions of employment, training programs, and the adjustment of grievances.

As a result of this larger conception of the dignity and importance of the personnel manager's place in the scheme of industrial and business administration, he has in many large companies been given rank on a parity with that of other major executives. The wisdom of such a step is not difficult to perceive. A high rank and corresponding authority and prestige are necessary in order to secure for him freedom from the binding influence of traditional points of view in the administration of human relations. When he speaks and acts with authority, there is less difficulty in inaugurating new policies and practices. This larger freedom enables him to express his independent judgment, without which his value to the enterprise is inconsequential. Far from lacking adequate authority for these purposes, some personnel managers have been much too timid to use the power already granted them. More than one chief executive has complained that the personnel department has not functioned effectively because of the hesitancy of the director in taking the initiative in introducing improved practices.

The elevation in the status of the director of personnel is bound to have the effect of attracting to this new profession individuals with real capacity for administering human relations. No person possessing the broad qualities requisite for the organizing and directing of a personnel department will accept a position having the limited authority and responsibility of a clerkship. Only a glance at the personnel departments of our most prominent corporations will indicate clearly how rank, prestige, and adequate salary tend to attract men of real ability. The most successful personnel departments are invariably those which have a high degree of authority and independence, because these departments have drawn to themselves men of ability and personality. Such men command the confidence of both management and wage earners.

Qualifications of the Personnel Director.—From what has been said throughout the preceding pages concerning the duties and requirements of the personnel job it should be clear that such a position in firms of relatively large size can be filled successfully only by men of extraordinary ability. Even in enterprises of relatively small size, the individual responsible for the administration of personnel relations must possess unusual capacity, much more than is possessed by the superannuated employee who sometimes is assigned to the task. The management of men is much more difficult than the management of machines and materials. The latter are inanimate and passive, responding definitely to the will and wishes of their manipulators; the former are animate and often impulsive, responding indefinitely and uncertainly to the orders of their superiors. It requires skill to handle machines; it takes ingenuity to administer men successfully. If as much time and money were spent in the selection of a personnel director and the formulation of the personnel program as are expended in the development of so-called efficiency schemes and employment of efficiency experts, the difficulties and wastes of industry and business would be reduced appreciably.

The director of labor relations must be a person with a wide range of qualities and abilities. The very nature of his job demands a sympathetic appreciation of the point of view and desires of the wage earners and a clear perception of the objectives of management. Practical wisdom and tact are indispensable if he is to succeed in establishing and maintaining friendly relations between employer and employee. On the other hand, situations frequently develop which require positive treatment and which must be met with firmness and determination. Indecision and timidity fail at such times, hence the need for a strong personality.

The application of new personnel policies and practices, which invariably involve a radical departure from traditional methods of handling men, always necessitates a good measure of common sense. Common sense is practical sense; it implies the ability to perceive the limits beyond which certain principles of procedure and certain methods of application cannot be pushed without negative results. In other words, common sense is a sense of reality. The possession of common sense does not preclude the possession of idealism. In the administration of human relations, idealism is a first essential; indeed, it is largely responsible for the growth and expansion of the best programs of labor management. Common sense, or a sense of reality, simply prescribes the boundaries beyond which idealistic experimentation must not be permitted to go. The refined balancing of the ideal and the practical in personnel management is a test of good judgment.

Breadth of vision and courage are necessary to the proper development of a personnel program. Breadth of vision entails the ability to look beyond the immediate present into the future; it involves the power to conceive new principles and new practices which promise to improve the relations between employer and employees. Vision of this nature is original and creative, projecting itself into the sphere of the unknown and the untried. Like the workmen he is expected to help manage, the director of personnel should have a desire for creative craftsmanship. But it is insufficient to conceive and propose new principles and new methods; one must also have the courage to insist upon what appear to be sound lines of experimentation, to defend the practices that are founded on equity, and oppose practices which are inequitable. Opposition to traditional policies and methods that are inadequate and unjust is not an easy matter, nor is the advocacy of untried ways of management a simple task. Both require more than an ordinary quantum of courage.

The causes of waste, inefficiency, and friction are not often very obvious. Their discovery invariably demands unusual industry and resourcefulness. Such a task requires not only a working knowledge of the technical phases of business but also the ability to trace results to their causal or conditioning factors. The possession of an analytical mind is, therefore, very essential in the administration of a personnel department.

The successful personnel director must be a good judge of men. One is never quite sure what businessmen mean when they say they are good judges of men and know thoroughly how to handle them. Supposedly, one is a good judge of men when one has the ability to perceive quickly their motives, penetrate their purposes, comprehend clearly their capacities and inabilities, and analyze their reactions. In other words, good judgment of men implies the ability to apprehend almost instantly what men can or cannot do, as well as what they probably will or will not do. As often used, the phrase "good judge of men" suggests an unusual capacity to detect at a glance moral, physical, and psychological traits. Most individuals have an abnormal optimism concerning their abilities to judge their fellows. There is reason to believe that such abilities are less the result of heredity than they are of acquired experience.

It is almost inconceivable that anyone can succeed in administering human relations unless he is unusually approachable. Approachableness means simply that one's personality and manner are such as to dispel fear and invite confidence. What is commonly referred to as a cold, icy personality has no place in the personnel office; it never succeeds there.

To the foregoing qualifications of the successful director of personnel, one must add others, such as a sense of humor, a goodly measure of patience, more than average intelligence, broad education, and considerable experience in dealing with people. And last, but by no means least, he must be interested in all problems of human relations.

PART II

PSYCHOLOGICAL ASPECTS OF LABOR RELATIONS

CHAPTER VI

PSYCHOLOGICAL ASPECTS OF LABOR RELATIONS

A Basic Psychological Truth.—The central fact which must be remembered in any study of personnel management is that both employers and employees are human beings, with all the potentiality for desirable and undesirable behavior which that quality of humanity implies. Those who manage, like those who are managed, do not check their psychological equipment at the entrance to the factory, mill, mine, workshop, or schoolroom. In taking up the daily routine of employment, men and women do not escape from the psychophysical traits that determine their behavior patterns both inside and outside the office or workshop. Men and women remain on their jobs what they are away from their jobs—just men and women. This is a simple psychological truth, but it is one that is quite generally forgotten or disregarded by those who are responsible for the administration of human relations in industry, business, finance, education, and public service.

It cannot be emphasized too often that the management of any enterprise is essentially the management of human beings in their relation to jobs and to other human beings. The smooth, orderly, and efficient functioning of this network of relationships is dependent upon a complex equipment of inborn and acquired traits which through the process of individual growth have been woven into the so-called "pattern of behavior." Abundant experience supports the conclusion that the limiting factor in the success or failure of any enterprise is human nature.

The Meaning of Human Nature.—Owing largely to the failure of the various schools of psychologists to agree, the term "human nature" is not a clearly definable one.[1] To the average person, the term still designates certain tendencies to activity which are instinctive rather than acquired. This conception results from a general tendency to separate the psychological self from the social self, and to attribute to the self or soul, as it is often called, certain formal or natural powers as distinguished from artificial or acquired traits of behavior. The natural, inborn self, is identified with such characteristics as reflexes and instincts; whereas the artificial, acquired self, is associated with such powers as reason and habit.

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[1] See DEWEY, JOHN, "Human Nature," *Encyclopaedia of the Social Sciences*, vol. 7, pp. 531–537.

Many think that original nature is formless and empty, hence capable of being molded completely by external circumstances. Human nature thus conceived is a by-product of environmental forces. Education and environment consequently are visualized as the agencies which create the human self. Euthenists and environmentalists generally are the active proponents of this point of view.

Psychologists quite generally incline to the belief that human nature cannot be properly conceived or defined in terms of the constitution of individuals, either native or acquired. Rather must human nature be conceived as a group of human traits which are developed and have significance only in and through institutional life with which the organism is surrounded. As revealed in the individual, human nature is only a potentiality; it becomes real and meaningful through the medium of cultural institutions, such as language, religion, law, the state, and the arts of life, which form the content of objective mind and will. "The supposition that there is such a thing as a purely native original constitution of man which can be distinguished from everything acquired and learned cannot be justified by appeal to the facts," says Prof. Dewey.[1] Such a conception of human nature, he argues, represents a "static cross-section" of man and ignores the factor of growth and development of human beings; it is a "snapshot at birth," which ignores past history in the uterus and all subsequent modifications. Biologically all growth is modification, and the conception of human nature as a fixed and enumerable set of tendencies is merely a convenient intellectual device.[2] As we shall see later, it is a necessary and helpful tool in analyzing the industrial significance of human traits. Acquired characteristics may and often do become so spontaneously a part of the self as to constitute for all essential purposes native equipment. Moreover, a glance back over a long biological evolution indicates that what now appears to be original and native is the result of a long process of organic growth.[3] Human nature thus appears as a composite of inborn and acquired characteristics which have become so closely interwoven as to be almost inseparable.

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[1] *Ibid.*, p. 533.

[2] See HOCKING, W. E., *Human Nature and Its Remaking*, pp. 49*ff.*

[3] DEWEY, *op. cit.*, p. 533.

The normal human organism reveals a dynamic and unfolding self. This being true, a valid conception of human nature is that which represents it as "growing from within—generating normally and spontaneously ways of acting and of responding to situations which are implicit in the fact of being human and being alive."[1] Sensory, emotional, and reflective powers are a part of the human equipment. Internal impulses and external forces unite to produce the unfolding self. The will to live and to be thus issues from a complexity of drives which are responsible for the making and the remaking of human nature. Life for the individual organism is a continuous series of adaptations and readaptations, the ever insistent choice of activities amidst perplexing and conflicting alternatives. Reflexes, instincts, emotions, habits, and stimulus situations are among the propulsive forces that mold human behavior. Human nature, then, is merely a convenient term for designating "the totality of motives, numerous, contradictory, and often mutually exclusive in action, which constitute the electric current so to speak, which charges the human being with aliveness and continuing action."[2]

Original and Acquired Traits.—Although it may not be scientifically accurate to divide human nature categorically into innate and acquired traits, it is a convenient practical device in approaching the problems of personnel management. "Practically, however, with reference to the possibility of control," says Prof. Dewey, "the distinction between the native and the acquired is important."[3]

Human behavior ranges from the simple reflexes of the physical organism, so pronounced in childhood, to the elaborate modes of conduct rationally determined, which characterize the normal adult. Between these two extremes, the behavior of the individual varies considerably in the degree of reasoned responses and consciously initiated activity. From the simple reflex actions to the complex forms of conduct, spontaneous responses in the presence of particular stimulus situations issue as the so-called "unlearned ways" of the individual organism. Each organism responds to certain stimuli in a manner which suggests hereditary predisposition. These hereditary traits—reflexes, instincts, proclivities to certain types of activity—constitute what is often referred to as the "original self," the "first nature."

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[1] TEAD, ORDWAY, *Human Nature and Management*, p. 13.

[2] *Ibid.*, p. 15.

[3] DEWEY, *op. cit.*, p. 533.

Whatever its degree of independence in relation to specific stimuli, this native stock of impulses is the common heritage and universal identification of the race. Each individual has these inherited dispositions—the same original fears, angers, loves, desires, and hates. Life for the human race, as for other higher mammals that evidence a bent for discretion and self-direction, is largely determined by these more or less instinctive urges. "These native proclivities alone make anything worth while," says Prof. Veblen, "and out of their working emerge not only the purpose and efficiency of life, but its substantial pleasures and pains as well."[1] The social and economic importance of these innate drives to action has been stated completely thus:

> The behavior of man in the family, in business, in the state, in religion, and in every other affair of life is rooted in his unlearned, original equipment of instincts and capacities. All schemes of improving human life must take account of man's original nature, most of all when their aim is to reverse or counteract it.[2]

Original nature, then, is a mosaic of reflexes and instincts, the latter differing from the former only in their greater complexity. Reflexes are the simplest manifestations of behavior; they are inborn responses which need only an appropriate stimulus to call them forth. Interesting examples are sneezing, laughing when tickled, and winking the eye when the organism is threatened. In the complex behavior situations with which personnel management is concerned, reflexes have little significance. Instincts are more important. An instinct, like a reflex, is an inherited tendency to behave in a certain way in the presence of particular stimulus situations, or at least a desire to so behave. The conception of "instinct" is indispensable in expressing simply the significant fact of *heredity*. Instincts are the elements of our hereditary equipment, in so far as these consist of dispositions to act in certain ways rather than others.[3]

Psychologists no longer assume that instincts exist as separable units of character. The instinctive responses of the organism are a complex network of interrelated activities. Internal stimulus and external stimulus conjoin to prepare the organism for response. Desires become motives, and motives, often reinforced by feeling and emotion, create the reality of experience. Instinct, it has been observed, is the representative of the race at work within the individual.[1] This is why human beings in their instinctive behavior appear to be most natural, and to manifest their greatest power. "The instinct is a channel down which the current of life rushes with exceptional impetus; once committed to it, we reach our highest pitch of personal self-consciousness, our greatest sense of power and command."[2]

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[1] VEBLEN, THORSTEIN, *The Instinct of Workmanship*, p. 1.
[2] THORNDIKE, E. L., *The Original Nature of Man*, p. 4.
[3] HOCKING, *op. cit.*, p. 50.

To admit that no single human trait holds undisputed title to individuality in response does not mean that human beings do not possess instincts. In a given situation numerous instincts are likely to be concerned; few instincts have a clear-cut right of way in response. Sense stimulus, central nervous adjustment, muscular response: that is the physiological pattern of an instinct. There is a sort of coalescence of impulses in human responses, and they seem to share vicariously in one another's satisfactions. Thus, successful wooing provides satisfaction for the mating instinct, acquisitiveness, self-assertiveness, and self-abasement.[3] Units of behavior, then, are a complex of responses to stimulus situations. Instinctive behavior is more primitive than reasoned conduct and appears when consciousness fails to provide more effective modes of behavior in the process of adjustment between the organism and its environment.

Innate impulses do not, of course, enjoy absolute control of the human organism. "Very few instincts remain intact in the human adult. The modifying pressures of environment are too insistent. The simpler reflexes keep their original forms, but even they are constantly reorganized into new acquired combination patterns or habits."[4] Inborn urges to activity are variable and adaptive and are controlled and checked by the imperious will to live; by reason, intelligence, and habit; and by developed codes of moral and social conduct evolved in the life of the group. Man's responses change under the discipline of social codes and cultural institutions, hence conceptual lines of response may differ radically from those indicated by the biological fact of instinct. Rationalized social control of instinctive behavior is one of the important accomplishments of social evolution. Human beings do not always surrender to the dictates of their hereditary impulses, but rather tend to construct a system of controls which preclude a return to native savagery through the blind following of inner urges.[1]

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[1] See Myerson, A., *The Foundations of Personality*, pp. 108, 109*n*.

[2] Hocking, *op. cit.*, p. 60.

[3] *Ibid.*, p. 66.

[4] Bernard, L. L., *An Introduction to Social Psychology*, p. 115.

Industrial and social progress would be inconceivable without this conscious control and direction of inborn traits. The complex habits of "learned" ways of behavior which are developed through suggestion, imitation, and rational supervision constitute one's "second nature." It is the degree of modification of original or instinctive behavior which measures the difference between savagery and civilization, between the disciplined and the undisciplined life. Complete surrender to the dictates of instinct would spell ruin for the individual and society.

The Relation of Body and Mind.—Body and mind are inseparably related, structurally and functionally; together they constitute the totality of individuality. There is a constant interaction between physical and mental forces, and an obvious interdependence. Out of this reciprocal influence of mind and body emerges the unity of the self. The mind is always affecting the body, and the body the mind. Underlying and conditioning all his conscious mental activities are man's physical traits and powers.[2]

Man is in the first instance a "physicochemical engine," producing, converting, and discharging energy constantly. The creation and liberation of that power in the human organism involve operation of the muscular, digestive, nervous, and glandular systems. The mutual influence of these systems affects the tone of the entire organism. Any attempt to administer human relations intelligently must take cognizance of these physicochemical reactions.[3] The will to power and the central drive to action are associated with these resources of energy, which are tapped through the instinctive tendencies of the individual. "The nutrition of the body and of the nervous centers produces a readiness to act, and indeed an uneasiness if action is delayed."[4] This intimate interrelationship of the body and the mind is, as we shall see in detail later, full of significance in industrial employment. The more clearly management recognizes this mutually conditioning influence of mind and body the more accurately conflicts in employment relations and the causes of waste and inefficiency will be understood.

The Emotions.—Human nature consists not only of the native tendencies to action but also of certain native and unlearned ways of feeling in relation to particular kinds of situations. Men and women are driven to action by tensions of feelings which are closely related to the impulsive drives. The importance of such feelings or emotions in employment relations is very great; they inevitably emerge in the complex organization of modern factory systems. Hence, understanding and control of such psychological forces are imperative, if efficiency and good will are to prevail.

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[1] *Ibid.*

[2] TEAD, *op. cit.*, p. 16.

[3] See WOODWORTH, R. S., *Psychology, A Study of Mental Life*, Chaps. II, III.

[4] HOCKING, *op. cit.*, p. 103.

Moods and emotions are closely connected with the metabolic processes of the organism and the whole functional life of the individual. Emergency emotions, such as fear, anger, rage, and sex, repeatedly present serious problems in the management of human relations. No less important are the so-called "moods" or affectively toned attitudes and dispositions.

An emotion is often defined as the way the body feels when prepared to act in a certain way. Profound and special significance is attached to organic changes under the stress of fear or rage, such as an increase of arterial pressure, quickening of the pulse, and change in the flow of the blood stream.[1] Emotion is fundamentally a drive to action. The organism is always in a state of suspense and tension until the act is performed and the emotional state is discharged. The importance of this emotional drive in the whole institutional life of society can not be exaggerated. Without it no institution could survive.

A generally recognized fact of psychological experience is that group consciousness, unity, solidarity, and cooperation are developed and sustained through an appeal to and cultivation of the emotions of constituent members of the group. In the management of human beings, it is essential to remember that men and women do not live by impulse alone, nor yet alone by reason and intellect. Each individual invariably desires, often craves, emotionally satisfying experiences. Assuming a socially valid and defensible set of corporate objectives, deliberate cultivation of unity of purpose and desire among employees is perfectly legitimate. Adverse consequences of such action come only when the motives and aims of the corporation are concealed and insincere, designed to benefit employer interests only. Emotions give power to individual experience on the feeling side, and, when properly directed, make possible the attainment of individual and social purposes. Fear, anger, hate, and love are notable examples of these psychic resources.

Fear is a disturbed state of the organism which results when strange or sudden objects are encountered and cause efforts to escape. Biologically, fear is a state of preparedness to act in the direction of flight induced by definite activity in the glandular and muscular systems. During fear, attention and thought are characteristically centered on the feared thing and on the urgency of escape. Hence, fear is always inhibitive. There is preoccupation with results, and normal functioning of the organism is impossible. Similar conditions result from stress of pain, anger, rage, and hatred. The resultant action of these emotions is special, limited and temporary; the excitement of stimulation invariably is followed by reaction or inaction. Fear, hatred, anger momentarily mobilize powerful resources in the individual, but it is an inescapable truth that they require constant stimulation to be kept effective. Wars demonstrate this fact. While a motivation of fear has some justification in the promotion of safety and health programs, systematic education has proved much more enduring in its results. Appeals to fear of unemployment, discharge, low income, and discipline tend to destroy later appeals to loyalty, workmanship, and interest in the job and the enterprise.

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[1] See BRIERLY, S. S., *An Introduction to Psychology*, pp. 83–86.

Anger and hatred, which are emotional states generated by strange, unjust, or obstructive conditions, are, like fear, destructive of industrial good will and efficiency. These emotional experiences represent a disturbed condition of the organism which centers attention on ways and means of removing the source of difficulty. An angry or hateful person is preoccupied, single-minded, unreflective, and invariably negative and destructive. Every appeal that was ever made to class, religious, or race hatred has amply demonstrated this truth. In the office or workshop, correction of employees' mistakes is not best made through displays of anger and severe disciplinary measures, since anger begets anger, opposition, resentment, and noncooperation.

Love or affection as a simple emotion is primarily sexual in its stimulation, but as a drive in human behavior it has a general and more significant character. Industrial and business experience everywhere is replete with examples of the efficacy of this emotion in developing devotion, loyalty, and cooperation. It is infinitely more effective as a propelling force for productivity than are such emotions as fear, anger, and hatred. Psychologists have proved that the mechanisms which produce the moods and emotions in individual life are highly subject to training or education. Emotional appeals when associated with intellectual appeals and valid objectives are essential to tap the springs of human action, but they must be integrated in a program designed to avoid extremism and excess of all kinds. Otherwise, control and direction of moods and emotions will yield disastrous results.

Habits.—From the moment of his birth to the time of his death, man is engaged in the formation and the re-formation of habits. This process of habit formation is fundamental in human behavior. Viewed psychologically, habit is a force which impels to activity and has within itself a certain ordering of its own elements. Habits are acquired through a series of trials or experimentations which in the end create an established behavior pattern through the appropriate combination of nervous and muscular response. That is to say, habits are formed by acquiring through practice a motor and mental alignment of responses which appear somewhat regularly in the expected pattern. This is as true of mental habits as it is of physical habits.

The importance of habit in employment relations is well established. Jobs require habit formation and re-formation. This whole process is, of course, intimately related to such factors as intelligence, aptitudes, training, and experience. Habits unite with instincts, emotions, and rational behavior to help form the totality of individuality. Behind the habits of an individual there may be numerous forces which must be recognized in personnel administration. Physiological conditions often combine with psychological, economic, and social conditions to influence the habits of individuals. Correction of undesirable habits of life and work, therefore, must begin with the removal of the causative conditions, plus determination to rebuild the behavior pattern. Intelligent and sympathetic understanding and direction, patient instruction, and generous cooperation are necessary in reshaping the habits of personnel in relation to jobs and fellow workers.

The problem of habits is, of course, wrapped up with the learning process, which concerns itself with the utilization of past experiences to make new experiences easy, intelligible, and useful to the individual. In this connection industry, like all institutions which use the learning process, must mobilize the factors of interest, attention, memory, intelligence, reasoning ability, imagination, and judgment. Imitation and suggestion are helpful forces in this learning and teaching relationship.

Psychology and the Control of Human Nature.—One of the functions of the psychologist is to describe fully and explain human behavior in its relation to stimulus situations. The industrial psychologist is concerned primarily with the mind of the worker; his interest is centered in the mainsprings of human conduct in the employment relationship. The mind of the worker is not open to inspection except as it is revealed in and through behavior. It is the relation between behavior and stimulus situations that claims the attention of the psychologist. Psychological science has yielded the truth that the growth of an individual may be so guided and directed as to assure a relatively satisfactory adaptation to situations, and that situations may be so altered as to eliminate undesirable conduct and encourage desirable conduct. This reconditioning and rebuilding of habits is an acknowledged function of applied psychology, of which industrial psychology and psychotechnology are a part.

The behavior patterns of individuals can be studied scientifically, and the resultant data can be used in the reconstruction of human conduct. The adequacy and appropriateness of stimulus situations can be determined from a study of responses. In this way, desirable and effective responses can be cultivated through modification of the stimulus situations in which the organism finds itself. Stimulus situations which excite human beings to action may be either internal, originating in such physicochemical factors as glandular secretion; or external, having their inception in the organism's environment; or both. Observation has shown that stimulus situations may be fairly enduring in their relation to responses. As such, they are called "motives," "incentives," "urges," or "desires." The word "motive" refers to the central drive which formerly was known as "will power" or "determination."

The responses of human beings to stimulus situations are made possible by the fact that the human body is equipped with a large number of muscles arranged on a bony framework movable in coordination. In recent years especially, the importance of the glands of internal secretion in relation to behavior has been widely recognized by zoologists, physicians, and psychologists.

Psychologists no longer attribute human behavior to any central impulse or force, such as the "will." Motivation has not infrequently been attributed to an innate faculty of the mind, referred to as "will," "determination," "choice," or "resolution." We now know that all desires and incentives have their origin in what are called the tissue needs of the body. Such tissue needs as hunger, thirst, sex, desire for change, desire for rest, etc., are the elements out of which motivation to activity issues.[1] Tissue needs in turn are closely connected with the metabolic process of the physical organism, that is, with the bodily functions that build dead food into living matter and, conversely, break down living matter into simpler products within the organism.

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[1] GRIFFITH, C. R., *Introduction to Applied Psychology*, p. 565.

The fundamental assumption underlying all attempts at the control of behavior is that human nature is more or less completely subject to laws which can be discovered and used by psychological science. Acting upon this assumption the psychologist endeavors to enhance the predictability of human behavior first, by understanding it, and second, by constructing procedures for its control. Experimental psychology has assumed the strict determinism of human thought and action. Human nature is, of course, tremendously complex and variable; an immense number of factors have to be controlled if human behavior is to be controlled. The psychologist approaches this difficult problem of control in the assurance that there is a large number of stable connections between stimulus situations and responses. This is the foundation of the learning process, as well as of the predictability of human conduct.

Psychotechnology and the Problems of Personnel Relations.—The application of psychological facts to industry constitutes what is known as the field of psychotechnology. In the discipline of psychotechnology, the phrase "differential psychology" or "individual psychology" has considerable importance "simply because the man in the factory, like the child in the schoolroom, is not a typical or average person but a distinctive individuality."[1] Individual differences rather than individual resemblances are what make significant the application of the science of psychology to the human equation in the workshop. The industrial psychologist must determine the origin of these differences and discover, if possible, the most effective method of changing through practice those differences which are modifiable. All human beings have a personal equation; each individual is a separate personality and "must be handled as an entity when it comes to a question of fitting him into industrial or commercial operations."[2] These differences between individuals are created by such factors as age, sex, race, and maladjustments of various types.

The problem involved in the application of psychological principles and practices to employment relations is revealed in the extent to which individuals actually differ from one another in the total range of their capacities, talents, aptitudes, training, and experience. Talents and aptitudes are paramount factors. The best workers may and invariably do earn twice as much as the poorest workers, where there are no artificial limitations on efficiency and earnings. Speed of decision, motor inhibition, volitional persistence, and many other psychological traits are responsible for variations in excellence among employees. Among persons ordinarily regarded as normal, the most gifted will be from three to four times as capable as the least gifted. Taking individual differences as a whole, however, the ratio 2:1 probably constitutes a more accurate representation of the differential.[1]

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[1] *Ibid.*, p. 438.

[2] *Ibid.*

The results of individual differences, of course, cannot be accurately measured in quantitative terms. Relatively slight differences between individuals may make "an enormous amount of difference in the part these persons may play in a social group. Slightly greater facility of one man in a factory over another can easily give the one steady work, whereas the other will be laid off whenever the factory load is decreased."[2] Industrial experience in every country proves this statement. The incidence of unemployment rests most heavily upon those who are commonly designated as unskilled and least efficient.

Individual differences originate in what we have discussed in previous pages as "hereditary dispositions." Although environmental influences, whether economic or social, must not be discounted in determining differences in individual performance on the job, hereditary forces are most responsible for marked variations. Individual differences are largely native in character. It is important, therefore, that these native differences be discovered prior to the employment of individuals, certainly before their placement on jobs in which they may cause accidents or similarly serious problems. One should recognize that some individual differences can be eliminated, if they are the result of acquired characteristics, such as bad habits and improper training. A proper system of education and training is sufficient to correct such differences. Experimentation has proved, however, that mere instruction and practice are not ordinarily effective in leveling out performances of individuals, where these are due to hereditary variations.[3] This fact makes imperative an adequate system of selection and placement, which should always be reinforced by an effective plan of follow-up.

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[1] See WECHSLER, D., "The Range of Human Capacities," *Scientific Monthly*, vol. 31, 1930, pp. 35–39.

[2] GRIFFITH, *op. cit.*, p. 440.

[3] *Ibid.*, p. 442.

Because adults are more or less stabilized in their traits and talents, industry must take them pretty much as they are found. The process of remaking or remodeling human behavior is an extremely difficult and costly one, and the results are seldom reassuring. Industry, therefore, needs the assistance of psychotechnologists in discovering hereditary and environmental sources of individual differences and in devising a workable system of fitting men and women into appropriate working situations.

The function of psychotechnology, then, is to bring to the understanding of personal and social activities in employment relations the same degree of guidance, planning, and intelligence which is often brought to bear upon other problems of living through the aid of the physical and biological sciences. Industry has long since availed itself of the results of such physical sciences as physics and chemistry, with the result that nature has become the servant rather than the master of man. The social sciences, including especially economics and psychology, promise just as resourceful assistance if employers can be persuaded to utilize them.

Management's Stake in the Control of Human Factors.—What has thus far been said concerning the nature of human beings and the inescapable fact of individual differences, whether due to hereditary or environmental forces, suggests management's interest in and responsibility for adequate comprehension and control of the personal equation. Until now management has made comparatively little use of the extraordinary resources of applied psychology in the selection, placement, and maintenance of personnel. In this fact may be found the cause of much incompetence in the administration of labor relations and the persistence of friction and conflict between management and workers.

From the standpoint of economic self-interest, what management wants is minds and energies permanently committed to an agreed objective, namely, economical and efficient production. The manager wants to "develop a motivation or urge to action in his group which *of itself spontaneously generates from within their efforts to get the results sought.* He wants a situation in which cooperation has become the natural and dominant mood and method of his group."[1] That is, he wants genuine zeal throughout his enterprise. Morale may be temporarily strengthened by such devices as athletic events, general recreational programs, suggestion systems, and group insurance plans, but these are not sufficient to guarantee complete cooperation on the part of the personnel for an indefinite period. Employees must become familiar with and clearly understand the general aims of management and the enterprise, and they must be convinced that such aims can be reconciled with their own self-interest. Without this clear perception of identity of aims and motives, friction and noncoöperation are inevitable. It has been said, "The activities which people do well, faithfully, and persistently and which give them that vital sense of spontaneous generation from within are those prompted by a realization that they themselves are getting a sense of self-fulfillment from them."[1] Industrial experience has amply demonstrated the validity of this observation.

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[1] TEAD, *op. cit.*, pp. 4–5.

The objectives of enlightened managerial procedure, which the science of personnel administration seeks to encourage, are the minimization of conflict of aims, the enhancement of mutual understanding, the cultivation of enthusiasm, and the humanization of employment relations. To this end, it has been observed, "It is supremely necessary that on the job and face to face with individuals and groups, executives should *be themselves, be natural, spontaneous and sincere.*"[2] Every executive must be a sympathetic and understanding human being if he is to succeed, because he is dealing with other human beings possessing traits similar to his own, who have immeasurable potentialities for cooperation and noncooperation. Experiential basis exists for the belief that in the future successful industrial management will depend as much, if not more, upon the intelligent administration of men and women as upon the organization of mechanical factors and the tapping of material resources. There is a pressing need for the management of men on a human and an equitable basis. Management's ablest allies in this new approach to employment relations and problems are the industrial psychologist and the specialist in personnel administration.

The Changeability of Human Nature.—Management's interest in understanding and controlling human nature is necessarily a derivative of the conviction that human nature can be modified and human behavior consciously influenced. The belief that human nature cannot be changed has ever been advanced in opposition to economic and social reform, and, consequently, against all modifications of traditional managerial attitudes and policies. "Human nature," conceived as the sum of inherent and acquired characteristics exhibited in behavior, does change and develop both in the life of the individual and in that of the race. Conceived in the narrower sense of inborn traits present in the nervous system, functioning without special direction, human nature probably remains very much the same. This factor of relative permanence in human traits is reason for both hope and despair, and provides the foundation for the science of psychology; hope, because it implies that once we understand human nature and comply with the laws of its behavior we can devise effective means of utilizing it to its maximum potentiality; despair, because, if human traits are fixed and unchangeable, there are definite limits to the reconstruction of human behavior. Wise administration of human relations in every group will recognize both the potentialities and the limitations of control.

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[1] *Ibid.*, p. 6.

[2] *Ibid.*

For the functioning human organism, modern industry and business have considerable significance. The industrial environment provides a comparatively new and unaccustomed medium for action. The increasingly complex organization of economic life presents problems of challenging proportions to all who are interested in the administration and direction of human nature. Modern industry and business present environments which impose burdens, restrictions, and disciplines unknown to mankind even a few generations ago. The adaptations which are required of the human organism in contemporary economic organization are extremely complex and exacting, a marked contrast to the simpler adjustments required by the relatively simple economic systems of the precapitalistic era. Formidable problems of human behavior and its control are thus presented because human beings are thrown into an environment which is not only increasingly complex but which is constantly undergoing radical changes occasioned by the irresistible march of invention and technological improvement.

What has just been said makes it doubly important to keep constantly in mind the conclusions concerning the totality and unity of human behavior. The real practical danger in dissecting the elements of human nature into categories of inborn and acquired traits lies in forgetting that in industry and business, as elsewhere, human nature functions as a whole; it functions as a totality in an always changing, evolving succession of stimulus situations. Human nature is essentially an outward manifestation of inward states; it unfolds in a constant stream of responses to external and internal stimuli. Impulses remain unchanged and unchangeable; their manifestations may be completely reconstructed. Skillful control of human nature involves an intelligent selection of forms and methods of expression. Human nature in its hereditary elements may remain unchanged; human conduct is greatly modifiable. Inborn characteristics cannot be destroyed; they may be repressed or sublimated.

Repression of Human Traits.—Lacking knowledge of original and acquired traits in their complementary relationship, management is often a negative, suppressive control of human conduct rather than a positive, constructive direction of human impulses and habits. It is a major task of the science of personnel administration to harness these natural and acquired characteristics for the constructive and cooperative performance of work. In achieving this aim, however, management must keep in mind the fact that nurture is as important as nature. Nurture selects, combines, and modifies, and, although it cannot eradicate the unlearned impulses of the organism, it can direct and control them. Human nature is the sum total of human dispositions or capacities, including those which are hereditary and those which are acquired.

The lack of an intelligent appreciation of human nature, coupled with a conscious endeavor to suppress it as something inherently bad, is partly responsible for the universal revolt against traditional institutions and methods of social and industrial control. Instinctive tendencies may be suppressed temporarily, but they cannot be destroyed. Even if the attempt to repress them is successful, the success is likely to be only temporary, since new and, in all probability, more violent destructive outlets will be sought for the expression and satisfaction of these basic impulses and emotional experiences. "The impulses that have prompted to a realization of the fullest possible life have, in practice, been too strong to be permanently thwarted. Whenever, too, essential impulses are denied legitimate expression, they tend to break out in a perverted form, and to take a costly revenge for their denial. To lose any of our human powers is to forfeit a part of our birthright."[1] These unreasoned impulses are the driving force of our endeavors; they may drive us upward or downward, depending upon their guidance. When this original or primitive self explodes, reason totters on her throne, and the results are often disastrous to the life of the individual and of the society of which he is a part. If suppression of this natural self inevitably results in psychic revolt against those conditions and those persons responsible for repression, it is fundamental to industrial peace, efficiency, and progress that the original channels through which this self is expressed shall not be blocked. A prominent industrial psychologist of England has stated this thought as follows: "Development depends upon free and varied expression, and in so far as modern industry prevents this it is either dangerously diverting or damming up a flood which will eventually burst through its barriers and destroy what we treasure most."[1]

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[1] EVERETT, W. G., *Moral Values*, p. 162.

Carlton Parker saw the problem with remarkable clarity when he suggested that three manifestations are possible in the career of any impulse activity. First, the impulse may find a surging, explosive discharge along blind and unintelligent lines of procedure and satisfaction. Second, the impulse or desire may be sublimated, that is, it may become a factor coordinated intelligently with others in a continuing and more or less rational action. Thus, a gust of anger may, because of its dynamic incorporation into disposition, be converted into an abiding conviction of social injustice to be remedied, and furnish the power to carry the conviction into execution. Finally, an impulse may neither be immediately expressed in isolated, spasmodic action nor employed directly in an enduring interest, but rather it may be almost completely suppressed.[2] Suppression, however, is not annihilation. Psychic energy is no more capable of being destroyed than are those forms we recognize as physical energy.

> If it is neither exploded nor converted, it is turned inwards, to lead a surreptitious, subterranean life. An isolated or spasmodic manifestation is a sign of immaturity, crudity, savagery; a suppressed activity is the cause of all kinds of intellectual and moral pathology.[3]

There is no more important lesson for managers to learn than that the inborn forces of race, at least in their psychological elements, are never capable of complete annihilation; suppression may dam them up, but they await the earliest opportunity for release and expression.

Industrial Significance of Repression.—The psychological aspects of industrial efficiency are increasingly claiming the attention of scientific managers. Those responsible for the direction of industry are beginning to learn what psychologists and labor economists have long since taught, namely, that behavior in anger, fear, pain, and hunger is quite different from behavior under repose, contentment, and economic security. The first set of psychic states issues in malcontent, discord, and inefficiency; the latter issues in industrial peace, harmony, and increased productivity. Balked instincts do not conduce to quantity and quality production; rather do they mean limitation of output, waste of materials, abuse of equipment, absenteeism, turnover, and careless use of machines.

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[1] WATTS, FRANK, *An Introduction to the Psychological Problems of Industry*, p. 175.

[2] PARKER, CARLTON H., "Motives in Economic Life," *American Economic Review, Supplement*, vol. 8, no. 1, March, 1918, p. 216.

[3] DEWEY, JOHN, *Human Nature and Conduct*, p. 157.

Psychologists have found that under the stress of emotional disturbances individuals tend to relapse to lower levels of efficiency. This process, known as repression, is caused in industry by certain powerful forces of working-class environment which are generally referred to as monotonous work, dirty work, the servile state of labor, economic insecurity of the worker, industrial autocracy, industrial fatigue, labor turnover, the labor spy, ca' canny, and soldiering on the job. Carlton Parker, who was a creative pioneer in the application of psychology to industrial problems, suggested that the worker who finds his native impulses balked pursues one of two lines of conduct. First, he weakens, becomes inefficient, drifts away from the plant, loses interest in the quality of his work, drinks, or deserts his family; or, second, he indulges in inferiority compensation, and to dignify himself, to eliminate his sense of inferiority and humiliation, he strikes, commits violence, or stays on the job and injures machinery or mutilates materials. Dynamite conspiracies may appeal to him, and he may welcome sabotage as a justifiable means of reprisal. In this state of unrest psychosis, the worker is not a responsible agent; he has departed from a state of psychic normality; his whole primitive nature is in revolt against the industrial system; he is psychologically maladjusted.[1] His whole being in revolt, the worker sinks to the lowest levels of economic inefficiency and social irresponsibility. This revolt may be violent and manifest to all, or it may be quiet, peaceful sabotage, hardly discernible even by those who are in immediate charge of the work of supervision.

The Need for Intelligent Direction.—If the repression of basic instincts affects so adversely the whole economic and social organization and disrupts the normal relations between employers and employees, it is logical to expect that rational control and sublimation of these inborn habits of race will issue in happier relationships and welcome economic effects. Two sets of problems must inevitably claim the thought and attention of scientific management. One set is technical and centered in the efficient and economical organization of money, materials, equipment, and machines.

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[1] For an excellent analysis of this subject, see Carlton H. Parker, *The Casual Laborer and Other Essays.*

Such problems demand the resourcefulness and ingenuity of the experienced financier, the trained mechanical engineer, and the business manager. These problems rise around material, passive, inanimate forces of nature, forces which become plastic beneath the skill and inventive genius of man. The other set of problems is psychological and physiological, centering around the effective organization and management of labor. Such problems demand the wisdom and tact of the expert in industrial relations, the human engineer, who understands the elements of human nature and knows how to administer labor relations. These problems develop from the predispositions to activity, the innate qualities of race, the acquired modes of behavior, and certain categories of ideas that are conditioned by the social environment.

Human Nature and Our Machine Civilization.—The last decade has witnessed the growth of definite sentiment favoring a retrogression to the simpler modes of living and working, such as prevailed in medieval civilization. All this is but a desire for escape from the unending grind of living daily by machine methods and monotonous routine of machine processes. There is little doubt that man's hereditary traits fit him best for primitive conditions of life and a simple state of economy and that this complex machine age is a severe strain on his nervous structure. Waves of unrest and revulsion are evidence enough of this fact. The unmistakable protest against our machine civilization, however, will prove more or less ineffectual. No amount of idealistic theorizing concerning a return to the simplicity of the craft-guild age will prove of general practicability. The complex civilization of our modern day is inseparably related to the machine. Humanity would be unable to maintain its present standards of comfort, luxury, and leisure without the continuance of machine methods and processes. Improvement in industrial relations lies rather along the line of scientific adjustment of machine methods to native tendencies and acquired habits of thought and behavior, and in the reorganization of the working environment with a view to the freest liberation of human traits and faculties. It is to this practical function of personnel management that we now turn our attention.

CHAPTER VII

PSYCHOLOGICAL ASPECTS OF LABOR RELATIONS
(Continued)

Mainsprings of Human Behavior in Industry.—There appears to be no agreement among psychologists as to what tendencies of the organism are instincts, in the sense of specific responses to specific stimuli. Some psychologists maintain that there are no instincts. This, however, is an extreme point of view. Freud and his followers recognize but two fundamental instincts, sex and self-preservation, which are said to be the determinants of all human behavior. To these the herd instinct is added by some. Other classifications have included anywhere from a dozen to over a hundred instincts, but the present tendency in psychological analyses is to reduce the number to relatively few. The natural tendencies which have commanded most attention as having especial industrial significance include workmanship, acquisitiveness, pugnacity, self-assertiveness, self-abasement, gregariousness, curiosity, sex, parental bent, play, and reflectiveness. These tendencies may not be instinctive, but they are predispositions which are reflected in human behavior.

In examining the relation of these impulses to industrial life, one must be mindful of the fact that such natural tendencies rarely, if ever, function separately. Instincts do not react independently of one another and as self-contained units of energy which habitually master the whole personality. Rather are they racial habits of reaction which have proved serviceable to situations of life, and so have been retained by the species in possession of them. When an instinct expresses itself, the whole being is affected. There is a remarkable coordination of the whole human mechanism, and, although the organism responds in divers ways under varying circumstances, there is invariably a sympathetic alliance among these native responses.

Psychologists have proved that the more effectively a course of conduct provides satisfaction for several emotional tendencies, the more frequently and fervently will it be repeated and the more difficult will it become to break down. Industry must, therefore, furnish adequate and appropriate stimuli to the whole human organism. Instinct frustration rather than freely selected modes of instinct expression seems to characterize modern industrial life. Management's point of view is, however, undergoing considerable change. There is an increasing acceptance of the doctrine that if industry is to function peacefully, efficiently, and justly, the worker's whole nature must be intelligently understood and properly stimulated. This is imperative, if, as has been observed, "nearly all our industrial troubles today are due to the disappearance of satisfactions to which men had become used, and the absence of new ones to substitute for them."[1]

Creative Experience in Work.—Constructiveness, contrivance, or the basic human desire to create things, which is referred to as the instinct of workmanship or the creative impulse, is a genuine urge of man's nature. It is as natural for the human child to make mud pies, build sand castles, or erect snow fortresses as it is for the birds to build nests or for the bees to construct the honeycomb. There is, however, a significant difference between man and his lower kin of the animal kingdom; namely, animals rarely improve on their hereditary pattern, whereas man's creative activities are characterized by ever-increasing variety in aims, methods, and results. "Thus the beaver constructs one type of home, the thrush one type of nest, but the houses of man are infinite in their diversity. So with all he does: his restless invention is ever appearing in new forms of surprising originality."[2] Out of this basic impulse have emerged modern machine methods which are responsible for modern capitalism. Scientific observers of human nature in industry have concluded that the craftsman's incentive to industry is not the mere gaining of a livelihood but the satisfaction of his desire to create things and to find adequate expression for his abilities and capacities.[3]

No count in the indictment of modern industrialism has received more emphasis in recent years than the current tendency to balk the free expression of the creative impulse. The appeal of management has hardly been to this desire. Mass production has been stressed; interest in workmanship has been sadly neglected. The ancient and medieval systems of industry stimulated careful craftsmanship; the modern system of industry stimulates motives of gain. For this reason the existing economic order is criticized as being acquisitive rather than creative. A typical sample of this criticism is the following:

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[1] Watts, Frank, *An Introduction to the Psychological Problems of Industry*, p. 204.

[2] *Ibid.*

[3] Watts, *op. cit.*, p. 191.

> Our modern industrial system, with an ingenuity so wicked that one might almost believe it to be deliberate, has contrived to take the joy out of craftsmanship, and so to choke up the very springs of art. It has replaced, whenever possible, the deliberate skill of the human hand by inhuman machinery, and the independent thought of the human brain by "soulless" organization. It has removed the maker or producer from all association with the public for whom he works, and substituted a deadening "cash nexus" for the old personal relationship or sense of effort in a corporate cause. Above all, it has taken from him his liberty, and forced him to work for a master who is no artist, and to work fast and badly.[1]

This is a severe contrast with the same author's description of craftsmanship in an ancient civilization.

> It is natural for human beings to enjoy using their own best faculties. Men never felt that enjoyment so keenly, or put so much high effort into its attainment, as in the workshop of ancient Greece. . . . There is hardly an object that they made, however crude, but bears on it, sometimes faintly, sometimes with speaking clearness, the touch of the spirit of art.[2]

The balking of the creative impulse is attributed to machine processes and their management. The machine, salesmanship, advertising, and monopoly have largely replaced good craftsmanship as the determiner of price. Current methods of production, with their subdivision of labor, monotonous and repetitious operations, excessive speeding up of work, rigid discipline, and close supervision, militate against careful craftsmanship. The worker tends now to be a mere adjunct to the machine. Whereas he once owned the tools, set his own speed, and planned his own methods, he now finds that the machine is timed and set for him, his methods come from the planning department, and his raw materials are systematically routed according to schedule. His degree of self-direction is diminished as the machine is perfected and made automatic. He is forced to adjust his physical and mental powers to the time, rhythm, and functioning of the machine; he merely feeds it and takes from it the product it continuously yields in clocklike precision. Mechanical science has reduced the importance of his personality to a minimum. His individuality, which was once reflected in the goods he made, is now absorbed into the machine and is precluded from sharing creative experience.

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[1] ZIMMERN, A. E., *The Greek Commonwealth*, 1922 ed., p. 260.

[2] *Ibid.*

The modern factory or office worker performs his task, not because he has a spontaneous interest in it, but rather because his employer will pay him a definite wage. The content of the pay envelope and the progress of the hands of the clock have assumed a primary importance. The worker is likely to be more interested in what he gets than in what he gives, or what he does, or how he does it. The creative elements of the job have little appeal for him, and he receives with cynical contempt or indifference the suggestion that there is joy in work. To him work is just work, and that means the absence of play and pleasure. But this reaction is not natural.

One should not conclude that the physical hardships of modern industry are on the whole greater than those entailed in earlier systems. Neither the hardship nor the exploitation current in modern industry is a new factor in the life of the industrial worker. But the increasing discredit of skill and productive effort in the qualitative sense becomes the disturbing factor to those who seek to improve human experiences and relations in industry. It is doubtful whether machine-made goods are inferior to the products of the old-time craftsman. Standardization and machine methods have brought greater accuracy and uniformity. Our concern here is not with the comparative hardships and merits of the old and the new industry, but rather with the influence of current methods upon the effectiveness of the worker. The question is not one of choosing between a machine industry and some other kind of system. The cards are stacked against us. We are committed to a machine civilization whether we like it or not.

Mechanization and systematization of industry are quite likely to have an adverse effect upon the mental life of the worker. Denied a part in planning and improving the performance of the task, there is little incentive to initiative and effort other than the minimum required by the almost self-operating machine. Each task is done over and over each day and every day the same, with almost unvarying speed in an unvarying way.

Monotony, which has a dulling effect upon the mental reactions of the worker, is not, however, without some advantages. Man needs a measure of monotony in toil, since shifting at a rapid rate from one job to another bothers him. Tending a machine often becomes such a routine task that the worker's mind is released for thought extraneous to the job. Monotony is the price we pay for living together in an organized community affording unprecedented comforts and conveniences. Were modern civilization to return to its primordial stages with their simplicity of economic structure, the race would have to do without many things—necessities and luxuries—which the machine and subdivision of labor alone can assure it in sufficient quantities to go around.

There is another phase of monotonous, repetitious work which must not be forgotten, namely, its peculiar attraction for the feeble-minded, low-grade worker. So perfect has the modern machine become that in many cases feeble-minded workers make the best machine tenders. This applies only to those machines characterized by simplicity of structure and operation, which require in the operator only enough sense to master simple and routine duties and to appreciate the necessity of faithfulness to the job. The efficiency of modern industrialism is thus putting a premium upon mental deficiency and is making it possible for subnormal individuals to adjust themselves readily to certain mechanical processes. The adverse effect which such changes will have upon the application of democratic principles to the control of industry can easily be imagined. The feeble-minded do not covet a voice in the councils of industry.

In the case of normal workmen, a different situation presents itself. For them, monotony intensifies the labor strain, and, unless relief is found through variations in physical and mental effort, it tends to have disastrous results. The subnormal employee is probably immune to the irritabilities of routine work.

> There is less in his soul striving to release itself; he has brought into the shop comparatively little that the shop cannot use; and so he accepts dumbly his appointed place in the scheme of things industrial, remains unbitten by ambition, and reacts not at all against subordination. The less mind one has, the less it resents that invasion of personality which is inseparable from large-scale and mechanized enterprises.[1]

In all probability, even the normal man finds a source of satisfaction in habit; when the job becomes automatic he can allow his mind to ponder over many things of interest and permit his fancies to wander. Routine also gives him time to think over any injustices which may be recurring in his industrial life and the life of his class. Scientific management is making this more possible, because it seeks to transfer to management the body of knowledge and skill formerly monopolized by the craftsmen and to centralize it in the planning department, where it is analyzed, standardized, and mechanized and then handed back in separate unit processes to semiskilled workmen, none of whom are familiar with the whole process.

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[1] POUND, ARTHUR, *The Iron Man in Industry*, p. 54

Even among those who may be classed as normal workers, creative interest does not exist in equal degrees of intensity. If there is no universal manifestation of creative desire, it may not be because the employee lacks this desire but because the working environment is such as not to elicit response. There are workers who rebel against the tendency of modern industries to thwart the expression of their creative capacities, but there are also those who are adapted to these tendencies, who find routine restful and attractive, and who resent any attempt to educate them into alertness. Unlike the subnormal class, this latter class possesses potential capacity for self-expression but grows indifferent to it.

The discouraging thing for creative normal workmen is that, when their desires have found constructive expression, the employer appropriates these ideas, suggestions, inventions, and improvements without in all cases giving the workers either financial or nonfinancial recognition. This is becoming more and more true as corporations build and equip their own laboratories for experimental work. The employer defends the practice of expropriation on the grounds that the wage or salary paid the employee covers not only the results of physical labor but mental activities as well, and that the company furnishes the funds for experimentation. While this may appear sufficiently reasonable and justifiable to the employer, it does not satisfy the worker's craving for distinction and recognition. Such a policy tends to discourage creative effort.

The preceding discussion of the impulse of workmanship suggests that ways and means must be found to recapture the intensive interest in work which once characterized craftsmanship, to rediscover the joy of workmanship, and to stimulate powers of invention and improvement which are rapidly escaping from all save the highly trained technicians and intellectual leaders. Society cannot afford to pay the price of material progress obtained by the dulling of workmen's sensibilities in repetitive industries. Some escape is imperative not only as a basis for increased efficiency in industry but also as an incentive to peaceful and constructive social progress. Variation in mental and physical activity has an effect upon the ideals of industrial workers no less notable than upon the ideals of other members of society. The true craftsman finds a great ideal in free opportunity for creative work. But in the modern factory, mill, mine, and shop, the wage earner finds little that sustains his interest, captivates his imagination, and fires his ambition. Conditions of industry rather antagonize him and drive him to seek a life of excessive leisure with its freedom from responsibility, or to discover revolutionary means of destroying the existing economic regime. It has been wisely said that to prosper by worthy achievements is the aim of the man who has found his life work, but to get rich by luck is the object of those whose work is their prison.[1]

If the creative impulse is to be successfully stimulated, every effort must be made to introduce variety into the performance of work and to provide for the workman a larger measure of self-direction and self-control. Scientific selection and placement of employees must be accepted as a principal rule of management, and the pace of the machine, the speed of the task, and the length of the workday must be coordinated with the worker's capacity to resist fatigue. Virility of body and alertness of mind go together. The strength of creative desires varies directly with mental and physical vigor; the greater the surplus of muscular and nervous energy there is in people, the greater will tend to be the urge to creativeness. Hence the importance of a proper working environment, of a minimum standard of physical health and mental comfort for any community. It is necessary that the material and human aspects of industrial organization shall be planned with a view to eliciting the freest response of the workers, because, "The instinct of workmanship brought the life of mankind from the brute to the human plane, and in all the later growth of culture it has never ceased to pervade the works of man."[2] This trait, however, easily suffers repression, and it is the duty of industry and the community to safeguard it.

The Acquisitive Desire.—Of no less importance in the functional life of modern industrial society is the acquisitive impulse or the original tendency to assimilate objects and events to the ego or self. This desire is manifested in those ownership activities which are designed to give us possession or control of such things as bring some form of physical or mental satisfaction. Indeed, so large a part does this fundamental desire play in the life of modern civilizations that capitalistic society is frequently characterized as an "acquisitive society," which is to say that its primary interests are in gain. Getting something for doing nothing is a far too common characteristic of every society which surrenders itself to an abnormal acquisitive complex. In such a social organization, wealth becomes the measure of greatness and the basis of social prestige and power.

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[1] WATTS, *op. cit.*, p. 198.

[2] VEBLEN, THORSTEIN, *The Instinct of Workmanship*, p. 37.

The constructive phase of acquisitiveness, however, cannot be gainsaid; it is manifest as a natural trait in the individual when, even in childhood, he becomes a collector of all sorts of things, not always of any apparent usefulness. Possession of things tends to give one a feeling of importance in the social and economic order, whether that order be the limited gang of playmates in childhood or the complex structure of modern economic society with its partnerships and joint-stock companies. Aristotle sensed this long ago when he observed, "how immeasurably greater is the pleasure, when a man feels a thing to be his own; for the love of self is implanted by nature. . . ."[1] Acquisitiveness is thus a powerful incentive to activity; one which must be recognized by those who would retain intact the existing order of things, as well as by those who hope and plan for a new social structure in which this impulse supposedly will be relegated to a subordinate position.

The desire for wealth is not the only form of expression of the native tendency to acquisition. Most persons have a desire for individual ownership of things, for personal possessions and material advantage which yield pleasant experiences. In conjunction with another common trait, the tendency to self-expression, the instinct of ownership leads workers to identify themselves in an intimate way with their tools, equipment, and machinery. This is due partly to the fact that we are more confident in dealing with what is familiar than in handling strange material and equipment. The typist works better on the machine she habitually uses than upon a succession of others equally good or even better, but strange. Of even more significance is another fact, namely, that we grow fond of what we use constantly and so take better care of it. Thus we acquire a sense of proprietorship.

The acquisitive impulse is a highly important factor in problems of personnel administration. Innumerable instances appear in industry where a worker develops a sense of ownership in the machine which he does not in reality own, but which he has tended for a long time. In one mill that came under our observation the management had recently scrapped a very old machine and replaced it with a new and better one which yielded larger income for management and the worker. Yet the operator had felt so keenly the loss of the familiar machine that for a long time his interest in his job lagged and his efficiency dropped. Changing men from old machines to new ones, or even to different machines of the same kind, frequently results in strikes. An indignant sense of injustice, often irrational, is aroused when management fails to consider this consciousness of ownership on the part of its workers. The old job, old machine, and old workplace are viewed as things belonging to men as really as their houses, wives, and children. Workers develop a sense of vested interest in their jobs. This explains the bitter attitude of unionists towards so-called "scabs" or strikebreakers. Strikers feel that the scabs are unprincipled intruders stealing jobs and depriving wives and children of necessaries and comforts. No amount of philosophizing about the strikebreakers' "right to work" can change this attitude and feeling.

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[1] Jowett, Benjamin, *The Politics of Aristotle*, p. 34.

When the impulse of ownership is satisfied in a reasonable way, there is developed a respect for property. Under such circumstances, sabotage and violent destruction of property diminish. A deepened sense of propertylessness or injustice breeds excesses. As a workman grows more prosperous in a material sense, the more conservative and law-abiding he becomes. This is a fact well known to employers and revolutionary leaders alike. The propertied employee feels more secure and is opposed to disorder and revolution. Ownership and responsibility breed conservatism. Even Karl Marx, the founder of modern scientific socialism, sensed this when he declared that the "workers have nothing to lose but their chains and a world to gain." The appeal of socialism is to the sense of propertylessness, of expropriation, of injustice. The current movement toward larger ownership and control of industry by the workers, whether emanating from progressive employers or the advanced wings of the labor movement, is the most mature and promising expression of this primal tendency to acquisitiveness. A landless peasantry is almost always a restless, revolutionary peasantry, and a propertyless industrial worker is usually susceptible to suggestions for the expropriation of the property-owning classes. "Poverty," said Aristotle, "is the parent of revolution and crime."[1]

Unfortunately, modern industry is so impersonalized and the amount of capital necessary to own an enterprise so great that there is little appeal to the desire for proprietorship and little opportunity for achieving ownership. In the period of craftsmanship, the worker's sense and claim of ownership in the product of his toil were given satisfaction. In the labyrinth of mechanical processes in modern industry, it is not possible for the worker to think or to speak of the product as his own. He has no basis for claims of ownership in any article. The article owes its existence to the toil and skill of many persons and its sale to many others. The worker does not control the process of production, the sale of the product, or the income from it. Little wonder he feels that his remuneration bears no equitable relation to productive effort, that there is no incentive to labor with enthusiasm, and that there can be no spirit of joyful accomplishment in work. The failure to take into account the universal desire for ownership is but further evidence of the imperfect motivation of modern industry. The movements for employee stock ownership, customer stock ownership, and individual home ownership, so general in the United States, are a recognition of this basic desire. Profit-sharing schemes are an attempt to elicit the spirit of cooperation which emerges from the ownership impulse.

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[1] *Ibid.*, p. 40.

Gregariousness.—Gregariousness, or the herding tendency, as it is called, is the urge to stay with one's kind. Like numerous species of the animal kingdom, man seems to have an inborn fear or dislike of solitude and isolation from his fellows. Aristotle's observation that "man is naturally a political (social) animal" is substantiated in practically every phase of modern civilization. The herd consciousness is active when a child objects to leaving the congenial warmth of the family circle at bedtime and is reluctant to exchange loneliness in bed for the familiar fellowship downstairs. This same consciousness makes the night watch of the sentry a tedious and uncoveted duty, increases the popularity of work which assembles hordes of people in the great beehives of modern industry and business, and forces emigration from the isolated rural community and the village to the congested city with its easy and free social intercourse. Human agglomeration continues in the great cities despite the fact that they are often too large for economic efficiency, adequate recreation, and proper sanitation. The trait of gregariousness probably explains why factory employment, though speeded up and paid low wages, grows more popular, while domestic and agricultural services are shunned.

Man's mental reactions to his work cannot be explained completely if he is regarded merely as a self-contained unit. Each individual must be studied in connection with the web of relations in which he lives and moves and has his being. "Throughout history man has always found his chief means of self-expression in work that is of social value, and has never lived happily apart from some definite group to which he could voluntarily yield homage, and from which he might derive emotional satisfaction and inspiration."[1]

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[1] WATTS, *op. cit.*, p. 167.

The church, political party, trade union, guild, fraternal order, and occupational association all bear witness to this basic desire.

Successful management of men is possible only when those who are responsible for the direction of industry take cognizance of this associational tendency of man. Conversation is a normal channel of communication. In the factory, an undue amount of conversation tends to hinder work, but the arbitrary suppression of it through rigid rules and regulations is not a solution of the problem. The way out must be sought in stimulation of interest in work rather than through the imposition of fines and penalties. It is an unwise employment policy to destroy the common medium through which men and women are united. In the factory, as elsewhere, conversation is a bond of unity.

The herding impulse is the cementing agency responsible for labor solidarity. It is foolish to break down the herding tendency when it takes the form of unionism. In advanced countries, this expression of the gregarious impulse is accepted as a natural and healthy activity, a thing to be nourished rather than destroyed. This universal trait also makes for man's extreme sensitiveness to the opinion of his group and accounts for his susceptibility to mob action and hysteria. Fear of being cut off from his fellows, a situation that few individuals can withstand, is often responsible for support of a strike policy which does not have the inward sanction of the striker. Group solidarity is the basic factor in the motivation of strikes, as it is of the general lockout initiated by the employers' association. It is important to remember that in times of stress when men are forced to fight with their backs to the wall, unconscious sympathies are on the side of revolt, and reason vacates her throne. In a strike, each individual has a potential capacity for violence if the group wills it, and especially if the attitude and policy of the employer become an obvious irritant. This is not an extraordinary reaction, but the simple manifestation of man's susceptibility to suggestion, his sensitiveness to approval and disapproval, his urge to imitation, and his desire for gain and advantage. He moves with the mob and acts with his group. Mass action is always an expression of the herding impulse; it yields devotion to the common interests and principles, and allegiance to the spirit and ideals of its kind. The employer's solution is not to run away from or to suppress the mass spirit, but rather to counteract destructive expressions of it by means of constructive and positive outlets.

Pugnacity and Rivalry.—The impulse of rivalry is manifested in our competitive system of commerce and industry. It can be and is capitalized in attempts to increase efficiency. The danger lies in overemphasizing and overstimulating it to the neglect of other motives equally valuable. The instinct of pugnacity is the prompting to fight; it is frequently expressed in activities to escape from restraint, to overcome obstacles, to counteract pain, and to counterattack. Anger and fear are the twin forces which stimulate pugnacity. Whenever the environment of the individual is such as to obstruct the free play of native tendencies or impulses, pugnacious activity tends to follow. In industry, the strike and the lockout are mediums of expression for this impulse. Caught in anger, social modifications of conduct are often dispensed with, and man functions in primordial attack or defense. Employers fight a hampering union; unions fight a dictatorial, czaristic employer.

Throughout history this impulse has been the basis of mass revolts and revolutionary movements. The story of manual labor is a long record of suffering and oppression, broken occasionally in the past by such incidents as the Peasants' Rebellion in England, the Peasants' War in Germany, the French Revolution, and the Russian Revolution. All class struggles have derived their motive power from the fighting urge seeking an opportunity for freedom of expression for the inborn desires of the individual. The fighting impulse in human beings, however, can be directed into constructive channels. Many employers have discovered these channels and instituted systems of rivalry and friendly competition among workers. Successful direction of this impulse is possible only after the working environment has been improved so as to elicit the cooperative response of the worker and prove to him conclusively that a spirit of justice pervades employment policies.

Whenever the ordinary channels of instinct manifestation are blocked by persistent opposition to all the claims and desires of the workers, the instinct takes on a "fighting form with the potential support of all the emotional energy of the personality, or it sinks back defeated, leaving the workers disturbed and irritated, and in ripe condition . . . for falling under the influence of others who are discontented."[1] When industrial discontent takes the tangible form of the strike or sabotage, the employer usually endeavors to persuade himself that such unrest is the result of the vicious and arbitrary interference of the walking delegate or professional agitator, who constantly seeks to insure his tenure of office by starting something and getting the men a new advantage. This is often the case. But it is more often true that conditions in the establishment are such as to make the workers susceptible to the influences of these so-called "outsiders," and honest scrutiny of the working environment may reveal the true irritant which must be removed if there is to be a healthy state of mind and enduring peace. There is experiential basis for the belief that industrial workers will seldom revolt against an employer whose employment policies and practices are founded upon principles of fair play.

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[1] *Ibid.*, p. 164.

The Play Impulse.—Each individual possesses a natural bent to engage in activity which has apparently little or no conscious purpose, but, in the mad rush of modern industry and business, it is often denied expression. Students of the psychological problems of modern industry have discovered that the play and creative impulses are closely related; that the latter probably originates as a specific differentiation of the former, manifested when the individual possesses an abundance of physical and mental energy over and above the ordinary requirements of life. Because of their intimate connection, any attempt to divorce permanently play and work is fundamentally artificial and injurious. Work which is generally constructive will always occupy the play energy of all normal individuals engaged in it, just as favorite games stimulate the athlete to spontaneous exertion. The normal athlete will always put considerable hard work into his favorite games. The fact that a large proportion of the people today appear to find no play and fun in work is not proof that these two impulses are not closely related, but rather that there is an evident maladjustment in our economic organization which precludes the happy alliance of these dispositions.

The great mass of industrial workers seek in play and recreation an escape and relief from the suppressive influences of modern life. None will dispute that the spirit of joyful accomplishment is absent from the average industrial enterprise, and that there is evident maladjustment between the worker and his job. It is common knowledge that many men seek relief in drinking, sexual excesses, gambling, and other activities which conduce to physical degeneracy. The constant nervous and physical exhaustion which the worker suffers would prove too great a strain were it not for certain avenues of escape. Even in the movies he finds his interest stimulated without heavy demands upon his reason, memory, or judgment. Recreation and amusement are spiritual nourishment to the routine worker who has no occasion or ability for heavy mental activity, whose days are spent in repetitious work involving neither responsibility nor judgment.

The workers are often summarily condemned for their excesses, which are not more offensive, but less concealed, than the excesses of their more comfortably fixed fellows. One must remember, however, that excesses are frequently the defense mechanism against something which is intolerable, against conditions which balk fundamental elements of human nature. It has been observed by someone that the low-grade amusements of the people point to something wrong with the existing scheme of things and indicate a passing of older forms of creative self-expression; that these violent play reactions are pathological protests against the drab monotony of existence.

Experience in the administration of industrial relations suggests that play and work need not be divorced. Ways and means of satisfying natural traits and emotions are being found. By improving the worker's opportunity for healthful recreation, his leisure time will be made more profitable, mentally and physically, and his increased vitality will to some extent be spilled over into his work. In providing facilities and opportunities for play and recreation in industry, it must be recognized that such action may involve undesirable limitation of the workers' circle of experience and social contacts. Moreover, even the spending of leisure is an art which must be learned, and many have not the intelligence or will to learn it.

Self-assertiveness.—Self-assertiveness, also described as self-display, mastery, domination, vanity, and ostentation, is the characteristic human desire for distinction; it is the urge to rise above the dead level of mediocrity, to build better than the average of one's fellows, to develop outstanding individuality. In common with all other impulses, the degree of intensity of this urge to achievement varies with individuals. There is a desire in every normal individual for admiration and applause, and it may lead to great expenditure of energy in the hope of impressing one's personality on one's work. It explains the swarming of youths to Hollywood in search of screen careers no less than the unprecedented flood of students to colleges and universities, correspondence schools, and night schools. Almost everybody wants to be somebody, and somebody a little better than any other body. This desire for leadership and mastery is often sought as a means to the gratification of other desires, but in many cases special satisfaction is found in leadership and mastery for their own sake.

The urge of self-assertion or self-display is closely related to the desires for rivalry, approval, workmanship, and ownership. The worker's automobile, phonograph, piano, radio, and home are not the exhibition of senseless extravagance, as is contended by those who would deny to others what they themselves covet and acquire, but rather an outward and visible sign of an inward feeling of worth and superior status. In present-day industry the genius and talent of thousands of workmen lie buried because the managers understand so little about the psychology of the worker as to deny opportunity for self-expression and self-assertion. The tendency is to suppress individuality and to encourage or force a spirit of docility, meekness, and sheepishness. The presence of hordes of alien laborers, ignorant of the English language and economically impoverished, has been a factor making for the suppression of individuality in American industry. The spirit of self-assertion and self-display can be harnessed for constructive use.

Disastrous results are in store for the civilization which mechanizes industry to a point where but few think while the many sheepishly and contentedly obey. The loss of initiative, of the spirit of achievement, of will power, and of self-respect are the inevitable consequences of extreme mechanization coupled with an administrative policy of suppression. "To take from men the opportunity for exercising initiative and judgment on the score that such exercise hinders speedy production, without providing alternative methods of self-expression along the same lines, is an affront to the instinctive nature of man."[1]

Finally, this spirit of self-assertion may take the form of demands for higher wages, a shorter workday, and improved conditions of employment; the men may insist upon a voice in the determination of shop rules, policies, and conditions, and the right to organize and bargain collectively either through company unions or independent unions. Such demands must be studied and considered in the light of reason and their relation to this fundamental desire to enjoy equality of opportunity, self-respect, and genuine self-expression.

Submissiveness.—Equally natural, but diametrically opposed to the desire for self-assertion, is the tendency to submissiveness or self-abasement. In many people the inferiority complex is pronounced; the tendency to submission overbalances the tendency to self-assertion. If the urge of self-assertion is the spirit which covets leadership, the urge of self-abasement is the spirit which desires to be led. Any industrial manager will testify that there are men and women in industry, as elsewhere, who apparently take pleasure in being supervised and bossed, who shrink from the assumption of leadership and responsibility, who labor strenuously provided someone else will direct, and who execute joyously that which others have planned.

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[1] *Ibid.*, p. 182.

Submissiveness is sometimes born of fear, sometimes of admiration, and sometimes of downright inertia. Many fear the possible consequences of self-initiated and self-directed action. In others, submissiveness is closely associated with hero worship; the guardianship of a strong leader is greatly admired and preferred to independence. This accounts for the dramatic role of the dominant union leader who dares do things the rank and file will not and cannot do. All are ready to worship him, often regardless of the honesty of his purpose or the integrity of his methods. Union leadership, like all leadership, is founded upon the bent of self-assertion on the part of the leader, and of self-submission on the part of those led. Loyalty to an employer has the same foundation; it develops out of admiration for the achievements of captains of industry. Many concerns have sensed the importance of this and have purposely circulated printed and spoken stories of the founders and current leaders of the enterprise.

Spontaneous submissiveness may be a healthy human reaction displaying a creditable reverence for deserving qualities and achievements; but if imposed and artificially cultivated it may become an undesirable reaction. If a dictatorial authority or bullying arrogance is used to humiliate and cow the workers, they may be made to feel insignificant, but in all probability not without the stimulation of a spirit of resentment, a feeling of injustice, and the stirring of dangerous emotions. On the other hand, industrial experience suggests that to treat workmen with the respect due them as personalities is to stir into life the spirit of loyalty and good will which is latent in the depths of every normal individual. This is an important consideration in the formulation and application of regulations governing shop and office conduct and the imposition of fines in the determination of which the workers have been given no voice. Disciplinary rules imposed from above cause irritation, resentment, and disobedience; those sanctioned from below conduce to acquiescence, obedience, and respect.

Sex and Parental Bent.—The instincts of sex and parental bent are rarely recognized as having industrial significance, but the experiences of industrial life indicate that both these impulses are important factors in problems of scientific management. The sex urge is frequently suppressed in modern industrial life and, when not sublimated into activities which absorb both interest and energy, tends to find an outlet in undesirable practices and excesses. That the postponement of marriage on account of the inadequacy of wage scales adversely affects both the health and efficiency of the worker is a fairly generally accepted conclusion of special students of the psychological problems of industry. The increasing nervous energy necessarily expended by girls in modern industry, the speeding up of machine operators, low wages, and long hours of exhausting toil have been recognized as factors in weakened powers of resistance and consequent sexual excesses and loss of fecundity. The perversion of the sex impulse is often responsible for indiscreet conduct of male operatives working on the same shift as females and for a similar attitude of certain male supervisors of female labor. On the other hand, industrial managers have testified that it is still difficult to persuade female workers to wear overalls or other sensible clothes which conduce to safety and efficiency, because women operatives often desire to attract the attention of men.

Measured in terms of sacrificial conduct, the parental bent is the most powerful of all the instincts. It is concerned mainly with protecting and cherishing the young in the period of infantile helplessness and appears as a much stronger tendency in women than in men. Promotion of the interests and welfare of one's own immediate family is the principal purpose of this impulse, and it naturally results in the expansion of the self to include parents, wife, and children.

Coupled with economic necessity, the parental urge explains the unstinted spirit of sacrifice which drives mothers into the factory and keeps them there despite accumulation of fatigue and adverse effects upon health. It keeps them there up to the utmost limits prior to childbirth and forces their return to work within a brief period following it. Department stores, offices, schools, factories, and mills are full of mothers who toil in order that their children may not only live but obtain larger educational advantages and achieve greater successes than have fallen to their own lot. The same native urge explains why many fathers tolerate undesirable conditions of employment and are patient with what would be for single men intolerable official attitudes and disciplinary measures. Many fathers and mothers in industry willingly consent to strike in the hope that the financial gains may provide greater comforts for their families, and many others eagerly embrace the chance to terminate a strike because they cannot bear to see their families in want of bare necessities. This impulse accounts for limitation of output in order to stretch work for the purpose of insuring subsistence for the worker's family. After all, a job means income, and income means food, shelter, clothing, and comforts. It is the parental urge also which compels the wage earner to direct his children into the professions rather than the trades and to covet for them opportunities denied himself.

Sensitiveness to Approval and Disapproval.—Closely associated with the bent toward creativeness and self-assertiveness and self-abasement is the tendency to obtain the approval of one's fellows and to avoid their disapproval. This sensitiveness to approval and disapproval is a significant force in group life. Individuals strike, toil, and sacrifice that they may win the plaudits of their kind. The appreciation and applause of the group of which one is a constituent member is often compensation enough even for the assumption of serious hazards to limb and life.

If human behavior is influenced by the fundamental desire for approval, it is no less motivated by the natural propensity to escape censure. Men and women refrain from many practices which to their own minds appear legitimate, rational, and proper, just because the generally accepted standards of the group would thereby be violated and social disapproval would result. The ethical codes of organized societies could not survive were it not for the desire for social approval. The fear of social ostracism is a deterrent of antisocial conduct.

In industry, sensitiveness to approval and disapproval has potentialities as yet scarcely discovered by executives. Hasty, harsh censure and discipline are frequently provocative of discontent and antagonism. When, because of the arbitrary exercise of autocratic executive powers, workmen are severely chastised and punished by fines, demotion, or discharge, the invariable consequence is a growing mistrust and dislike of management manifested in ca' canny tactics, sabotage, lack of cooperation, and accentuated class consciousness. On the other hand, when criticism and rebuke are offered in a firm but friendly manner, such adverse effects are not so likely to result. Moreover, when creditable conduct and achievements are recognized, appreciated, and applauded, there is a noticeable effect upon workshop morale, cooperation, and loyalty.

Curiosity.—The impulse of curiosity is the desire to investigate strange situations and manipulate new objects. As it appears in the average human being, curiosity is almost reflex in its simplicity.

This impulse is closely associated with the creative tendency, and by some writers these two are presented as identically the same reaction. In the final analysis, curiosity is the desire to learn why things occur and how things are done.

Scientific managers with a clear perception of the value of this propensity have encouraged employees to learn the elements of manufacturing processes and the parts of machines. In this way, wider latitude has been given to invention and improvement, and enhanced efficiency has resulted. No attitude is more likely to increase waste and inefficiency than that which discourages workers from learning all they desire to know about processes and machines, and which is indifferent to their inquiries concerning the nature of operations.

So long as machines are not under the control of those who operate them and operators have no interest in the process except the wage it yields, efficiency is impossible. Frequently workers neither understand the machines they operate nor care for their purpose.

> But if men understand what they are about, if they see the whole process of which their special work is a special part, and if they have concern and care for the whole, then the mechanizing effect is counteracted. But when a man is only the tender of a machine, he can have no insight and no affection, and creative activity is out of the question.[1]

The necessity for doing all that can be done to encourage expression of the impulse of curiosity arises from the dulling influence which machine processes and division of labor have upon the mental faculties of the worker. No one has given us a better picture of these effects than has Adam Smith.

> The man whose whole life is spent in performing a few simple operations, of which the effects, too, are perhaps always the same, or very nearly the same, has no occasion to exert his understanding, or to exercise his invention in finding out expedients for removing difficulties which never occur. He naturally loses, therefore, the habit of such exertion, and generally becomes as stupid and ignorant as it is possible for a human creature to become. . . . His dexterity at his own particular trade seems, in this manner, to be acquired at the expense of his intellectual, social, and martial virtues.[2]

[1] Dewey, John, *Human Nature and Conduct*, p. 144.

[2] Smith, Adam, *An Inquiry into the Nature and Causes of the Wealth of Nations*, Book V, Chap. I, p. 302 (Bohn ed.).

This is an interesting observation by one whose philosophy of individualism has been so largely responsible for undesirable attitudes and policies in the management of labor.

Fear, Flight, and Migration.—Man has the capacity to be fearful under many varying circumstances, and to flee from conditions, situations, and experiences which appear undesirable and harmful. "Fear may become abject cowardice, prudent caution, reverence for superiors, or respect of equals."[1] Moreover, to many human beings the coming of spring, after the sedentary and indoor life of winter, suggests migration to other areas of habitation. Students of migratory labor know how promptly and spontaneously hobo migration begins with the first warmth and sunshine of spring.

Economically, the most important fear that obsesses the mind of the individual is worry and misgiving concerning the security of the future. Fearful forebodings relative to seasonal and periodical unemployment and the loss of a job through unreasonable discharge have a detrimental effect upon health and efficiency. It is a common experience of the race that men tend to move away from conditions of economic insecurity and to migrate to areas of larger economic opportunity and security. This is the potent force in the constant flux and redistribution of workers so characteristic of labor turnover, as it is in the political plans and purposes of nations that seek an outlet for surplus population.

The Function of Reason in Personnel Administration.—The modification of the working environment offers a wide latitude for constructive manipulation of the human traits, that is, for their control, sublimation, and proper direction. Human behavior is constantly undergoing great modification under the influence of reason, intelligence, and socially prevalent habits which adjust the individual to the ways and requirements of the group. If cumulative change and adaptation were not possible both in the individual and in social and economic institutions, constructive industrial progress would be unthinkable. If man is primitively an untutored savage, trial and error, customs, tradition, and intelligence eventually modify his original nature.

The characteristic of man which differentiates him from the lower animals is his ability to learn readily from experience, that is, his degree of intelligence and reason, and his capacity consciously to acquire new habits. This ability is responsible for his tendency to suspend shortsighted emotional desires in favor of a reasoned response, often delayed, which yields satisfaction to several simultaneously stimulated desires at once. Out of this trait emerge the activities, conventions, habits, and morality of organized society. Emotion ever remains a potent factor in group unity, but the blind and unthinking instincts find a coordinated response or sublimation through the application of the balm of reason and intelligence. Reason and conscious direction tend to supplant trial and error as the method of progress. Thus, as has been suggested, devotion to a person, principle, or cause will short-circuit all our pugnacity, constructiveness, curiosity, and submissiveness into a single channel of enlightened service.

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[1] DEWEY, *op. cit.*, p. 95.

So great is the satisfaction derived from mental activity that some writers speak of thought as instinctive. Be this as it may, it is a generally known fact that many inventions and discoveries spring costless from minds thinking for the sheer joy of it. It is, therefore, a primary duty of society and industry to see that the individual's environment is not only such as to permit but positively to encourage opportunities for mental activity. One should recognize that all parties to industry have definite interests and ideals which must be rationally and intelligently guided, if industry is to escape the disastrous consequences of excessive indulgence in the emotional and explosive reactions of the primitive self. "We shall regress to the anarchism of elementary passion unless we can conserve a working synthesis of the constructive interests of all engaged in industry."[1]

Progress in industry and employment relations is too much the product of accident, and too little the product of intelligent guidance. If the human race desires to assure continuity of progress, it must find appropriate stimuli for inborn instincts and devise intelligent ways and means of guiding them. As the instincts constitute the first great factor in culture, so modifications of instinctive behavior through intelligence and habit are the second. Original human endowment of instincts changes but little; habitual and acquired elements of human life change unremittingly and cumulatively. There is frequent conflict between instinctive and acquired modes of behavior of workers on the one hand, and the policies and practices of scientific management on the other. These must be harmonized if industrial good will, peace, and efficiency are to be realized.

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[1] WATTS, *op. cit.*, p. 208.

PART III

THE TECHNIQUE OF SELECTION AND PLACEMENT

CHAPTER VIII

JOB ANALYSIS, SPECIFICATION, AND STANDARDIZATION

Importance of Scientific Job Analysis.—Two sets of information are essential for the successful operation of the employment division of any business organization. First, there must be available a considerable amount of knowledge concerning the requirements of each job, and second, there must be information with regard to the qualifications of individual workers. There is a tendency among employment departments to place greater emphasis upon the latter than upon the former. Often the responsibilities of selection and placement have been approached largely from the standpoint of the human factor divorced from the elements of the jobs to which the employees are to be assigned. Meticulous attention devoted to the art of reviewing, extreme care exercised in the development of application blanks and other paraphernalia of hiring, and assiduous experimentation with various kinds of character analysis and intelligence tests, all suggest that "man analysis" rather than "job analysis" has commanded the energies of employment managers. Perhaps this is as it should be, but there is every reason to believe that human analysis has little value for the employment department except in relation to specific positions. The necessity of analyzing jobs, as well as men, is rapidly becoming apparent, and employment managers are beginning to invade production and operating departments in search of data relative to the jobs to which they are constantly expected to assign new workers.

Job analyses and the resultant job specifications are methods of precision; they are concrete descriptions and are indispensable requisites for thoroughness and accuracy in employment activities. Job standardization also has become an important technique in scientific management. Successful adaptation of the working force and effective competition are impossible without these aids. In the absence of the data which job analysis yields, proper selection and placement are inconceivable except by accident. Similarly, successful maintenance of the working force impinges at many points upon a thorough knowledge of the positions in which men and women are to work. No small amount of discontent and inefficiency in the workshop, office, and store results from dissatisfaction with jobs in one or several of their elements. There can be no significant quantity of good will in employment relations so long as serious maladjustments obtain in the relation of workers to their work. Maximum efficiency in production cannot be gained unless the one best way of doing the task is established through scientific investigation, followed by steps assuring the selection and training of the individual most able to complete the task that way. Job analysis enables the employment department to see each worker in relation to a specific type of work and to assure proper adjustment between the man and the job. Job specification sets forth the requirements of the task, and job standardization assures that the best method of completing the task will be effected by establishing and maintaining uniform standards and technique.

The Meaning of Job Analysis and Specification.—There are many economic advantages in a high specialization of labor. Adam Smith, writing in his *Wealth of Nations* in 1776, recognized three reasons why the division of labor increases production: It affords an increase of dexterity in every workman, effects a saving of time otherwise commonly lost in passing from one kind of work to another, and leads to invention of a great number of machines which assist the laborer in doing the work of many. To these three major advantages so ably drawn a century and a half ago can be added a fourth: Division of labor makes possible the use of all kinds of mental and physical equipments of mankind. This is true, however, only after both *man* analysis and *job* analysis have been completed.

Job analysis and specification represent scientific attempts to "break down" the many complicated actions which are involved in the performance of a task, and to establish the proper way of employing human labor in the completion of the work. Thus *job analysis* can be said to consist of the discovery and interpretation of the component elements of a job, and *specification* involves the determination of the human qualifications required for its effective performance. The former necessitates a detailed study of the essential factors pertaining to the job (specific elements of the job), the modifying factors that surround it, the conditions governing the worker's relation to it, the relation of the particular job to others in the organization, and the effect of its performance upon the health and general reactions of the worker. Naturally, the scope of the analysis will vary with the needs and purposes of the individual enterprise, but the dominant aim will always be identical;

namely, *the most effective adjustment of the worker to his work.* This major purpose is suggested in the following standard definition of job analysis: "the determination of essential factors in a specific kind of work and of qualifications of a worker necessary for its competent performance."[1] When a considerable range of directly related jobs is covered the process is known as "occupational analysis."[2]

As the term job analysis is commonly conceived, its meaning is not identical with that of job standardization. Job analysis has to do with the anatomy of the job. Specification then outlines the human qualities and characteristics necessary to carry on the task to greatest advantage. Then follows job standardization which establishes mechanical facilities and techniques to be matched with the human element in order not only to effect but to maintain standards of efficiency in this technique with those individuals best qualified to do the work. As will be shown later in considering its fundamental uses, job analysis is frequently applied for the purpose of facilitating the selection, placement, and maintenance of employees, including the important functions of transfer and promotion. When so used, definitely related sets of information are stressed, including the nature and conditions of the task; the duties and responsibilities involved in its performance; the qualifications required in the worker; and such conditions of employment as pay, hours, privileges, opportunities, and undesirable features. The process of analysis followed in the collection, tabulation, and interpretation of these facts is referred to as "job analysis." The descriptive data which are yielded by this analytical process are known as the "job specification," especially when such descriptive statements are used in selection, placement, and employee follow-ups.[3] A combination of the specifications setting forth the human standards and those setting forth the physical conditions under which the work is to be done (the tools, speed, equipment, and all other facilities of work) make up "job standardization."

Job analysis and specification are sometimes associated with time study, but these are not identical even though they contain many items of information in common. Time study usually has a very definite relation to scheduling and planning of work and is concerned more with the technical nature of the job than with the relation of the job to the worker. It is thus an essential part of job standardization. In fact, both simple time study and micromotion study[1] are methods by which job analysis, specification, and standardization can be made. Job analysis and job specification, however, are more directly concerned with those characteristics of the job that have an immediate influence upon the worker's relation to it. Much of the information gathered in time studies is too detailed and technical to be of great value in the selection and placement of employees, so is used as standards of work for proper training. On the other hand, job specification is more comprehensive than time study since it involves the establishment of standards made possible through time and motion study. Broadly speaking, job specification includes a general description of the nature of the task which is to be done; a statement of the primary physical and mental qualifications, education, and experience required in its operation; a summary of employment conditions, such as wages, hours, shifts, vacations, and possible lines of promotion; and other advantages and disadvantages with which new employees should be familiar. The various forms of time study are not concerned with such ramifications of information but tend to be confined to the more technical phases of the task.

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[1] HACKET, J. D., *Management Engineering*, vol. IV, no. 5, p. 344, quoted in *Cost and Production Hand Book*, L. P. Alford, editor, 1934, p. 517.

[2] Sometimes referred to as "occupational description."

[3] See JONES, E. D., "Job Specifications," *Federal Board for Vocational Education. Bulletin* 45.

Development of Job Specification.—Job specifications have emerged from the movement for greater standardization and centralization in employment procedure. As soon as the functions of selection and placement were centralized in the employment department, it became evident to many employment managers that, if departments were to do their work satisfactorily, it would be necessary to have accessible information concerning the nature of the jobs in the enterprise and the particular qualifications required for their successful performance. The origin of job analysis and job specification as instruments of precision in the standardization of performance, classification and grading of occupations, and selection and placement of employees, must, however, be traced to the publications of Frederick W. Taylor, whose work has already been described in Chap. III. Here, as elsewhere, in scientific management, Taylor did pioneer service. At present, however, the United States Department of Labor and the Employment Service are rendering signal service in the continuation of their Occupational Research Program on Job Descriptions launched in 1936.[1]

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[1] Micromotion study is time study and analysis by means of a moving picture camera whereby every movement and all conditions of work are recorded on the motion-picture film. It is used in doing a piece of work, in the development in practical detail of the best manner of doing it, and in the determination of time required. (*Cost and Production Handbook*, p. 516.) Thus time study, as herein used, refers to both the stopwatch study and motion study involving photographic procedure, although often these two phases are treated separately.

Since the publication of Taylor's *Shop Management,* in 1911, job specifications have gone through a considerable process of development. The first attempts consisted in the making of random notes, hastily jotted down, giving an informal description of individual jobs. These descriptions were too incomplete for satisfactory use in selection and placement and were even less satisfactory in the execution of transfer and promotion plans. In the hope of avoiding the defects of random notes the essay specification was developed. These essays, which were written by the worker on the job, the foreman, or someone in the employment office, were primarily descriptive statements in narrative form setting forth the nature of the work. Essay specifications met with considerable success. They not only presented more information than had hitherto been available, but also afforded a real opportunity for full expression on the part of those who were most vitally concerned. But this new method was cumbersome and consumed much time. The essays often rambled and were incomplete. The busy employment executive found it impossible to locate quickly specific items of information which he desired in interviewing prospective employees. There was a conspicuous lack of uniformity in the descriptions of similar jobs. "The tendency in many cases was to draw an ideal picture rather than present a practicable workable minimum. As a result, information, otherwise very important, was made unusable."[2]

It soon became obvious that a more systematic procedure would have to be devised for obtaining information about jobs and for making this knowledge more readily accessible to employment officers. The result was the development of special forms which gave standardized information about the various tasks, specified particular items to be checked or indicated, and provided for a descriptive statement of duties and qualifications. The new plan retained the advantages of the essay specifications without its glaring defects. Information could be obtained quickly, there could be uniformity in both content and form, and particular items of information could be made readily accessible for reference. Moreover, there was still opportunity for a full discussion of important elements of the job. Improvement has continued, until today brief, complete, and clear job specifications are found in many establishments and can be used successfully even by an inexperienced interviewer. Standard forms which can be used in different occupations and in different plants have been designed, but there obtains considerable individuality in most forms because they have been developed to meet the needs of particular enterprises.

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[1] See, for instance, the exhaustive *Job Descriptions for the Construction Industry,* published in July, 1936, by the Division of Standards and Research under the joint supervision of the United States Department of Labor and the United States Employment Service. This is a part of the results of a research program which is to cover a complete job analysis of every industry throughout the United States.

[2] JONES, E. D., "Job Specifications," *Federal Board for Vocational Education, Bulletin* 45, p. 19.

Need for Job Analysis and Specification.—In the small shop or office where labor turnover is insignificant and the employer is in intimate contact with his employees, there is no need for detailed analysis of jobs. When a vacancy occurs, the man who does the interviewing and the hiring is usually sufficiently familiar with the position to fill it successfully. Sometime in his experience with the company he probably has held that very job, or the ones immediately below or above it. At least his daily contact gives him fairly complete information concerning the requirements of the various positions so that he needs only to refer to a printed card or slip of paper for the necessary data.

To a lesser extent this is true of the larger organizations in which the functions of hiring and firing are assigned to the foremen or departmental heads who are familiar with the nature of the jobs in their respective departments. Under such circumstances the need for job analysis and job specifications is not urgent. But with the transfer of responsibility for hiring and firing to the centralized employment department in charge of junior executives, high-grade clerks, or special employment managers, the collection and analysis of data concerning the various jobs and occupations in the enterprise become imperative. It is impossible for the average interviewer to be familiar with all the details of all the jobs in a modern plant or office of any size. Consequently, department heads, foremen, and other executives are asked to specify in considerable detail the requirements of different tasks. Standard job specifications make it unnecessary to call for these details over and over again as new men are hired for vacancies. Other conditions which make it expedient to introduce job specifications will appear when the purposes and uses of these instruments are considered.

Despite the urgent need for job analysis, its adoption is not an easy matter. Many shop executives are not in sympathy with this phase of personnel administration. Managers of the old school view standardization in any form as wholly unnecessary and insist that it is far better to allow the informality of individual judgment in such matters as selection and placement. The making of a job analysis usually requires ability to recognize, isolate, and describe the various elements of each job, and the descriptive statement of these elements must be drawn up in clear and concise form. This may in part account for opposition to analytical processes. Shop executives are rarely trained to analyze and describe their own duties and the duties of their workmen, so many find themselves in difficulty when asked to make a job analysis. Standardization, however, is fundamental to the highest efficiency and greatest economy. In so far as job analysis and job specifications are essential to these ends, executives will be compelled to accept such procedure as an established part of the personnel program.

Purposes and Uses of Job Analysis.—The scope and method of job analysis will invariably depend upon the needs and conditions of the individual establishment and will be limited by the purpose which the analysis is to serve. Viewed broadly, job analysis may be introduced for one of two general purposes, or both. It may be directed toward improvement in technical efficiency, in which case a minute dissection of the job through time and motion studies will receive the major emphasis. Or, job analysis may be introduced for the purpose of perfecting the technique of hiring, in which case emphasis will be placed upon the more general specifications that aid directly in successful adaptation of new employees and the reallocation of old ones. These two general purposes are directly related in that the achievement of the one invariably implies at least partial achievement of the other, and both are fundamental in improving the general efficiency of the whole organization through job standardization. Job analysis, however, may have many specific purposes in the comprehensive scheme of employment management. It is necessary to direct attention to some of these.

1. *The Use of Job Specifications in Hiring.*—For many companies job specifications have their greatest usefulness in the selection and placement of employees. In setting forth the requirements of particular jobs and the qualities which the workers who are to fill them must possess, such specifications fill a pivotal position in the employment function by bringing together the right man and the right job. To the interviewer, job specifications are an impor-

tant instrument, if not an indispensable one. Without them, intelligent interviewing is almost impossible and accurate placement is inconceivable. A clear description of particular units of work defines the job and provides an adequate basis for judging the fitness of an applicant. Equipped with the necessary information, the interviewer can present to the applicant a complete description of the nature of the work, the conditions under which it is performed, the duties incident to it, and the opportunities afforded by it. Not only is misplacement thus avoided, but misunderstanding is diminished.

2. *Job Specifications and Job Grading.*—The grading of jobs consists of the determination of their relative values in a department, a shop, or an entire plant. Job and occupational rating is usually accomplished in a haphazard fashion and frequently amounts to nothing more than crude guesswork. Careful, systematic analysis furnishes reliable information concerning the degree of skill and knowledge required in the job; the mental and physical effort exacted; the disagreeable conditions attending it; and the value of the product, materials, machines, and equipment. With this information available, it is a comparatively easy matter to determine the relative importance of each job in any operating unit of the plant and its value to the entire establishment.

3. *The Relationship of Job Analysis to Wage Rates.*—Job grading makes possible job classification, which has been defined as "the segregation into groups, under common designation, of all positions requiring similar skill, training, or ability, and having approximately the same relative value in the industry."[1] Job classification is usually made for the purpose of standardizing wage rates. The inconsistencies in rates of wages for similar, if not identical, jobs and occupations in American industrial organizations present a curious anomaly, in view of employers' insistence that employees be paid according to their efficiency and service. Innumerable instances of glaring inequalities obtain, of which the following is typical: "In one department two typists are seated at the same table and perform exactly the same work. One receives $62.50 a month and the other $100 a month. A time study of the output proved that the employee receiving $62.50 a month performed more work each day by one-third than the employee receiving $100."[2] An employment manager in a large industrial plant has stated that in his organization there was a difference of from $20 to $40 a month

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[1] *Ibid.*, p. 59.

[2] *Ibid.*, p. 51.

in wage rates of various departments performing practically the same kind of work. Other personnel officers have cited similar cases of inequalities and have confessed that it is almost impossible to remedy the situation by a thoroughgoing revision of wage scales, because the management displays no interest in job analysis and job standardization. Further discussion of these practices will be reserved for the chapter dealing with problems of salary control and wage standardization (Chap. XVIII).

The effects of such inconsistencies in wage rates upon the personnel are far-reaching. There is an undercurrent of dissatisfaction which encourages numerous requests for interdepartmental transfers, and, if transfer is denied, competent workers frequently go "shopping for jobs" in other plants. Even if the men remain with the company, there is no incentive to efficient service and the tendency is to withhold their best efforts. By providing specifications which form the basis for equalization of wage rates, job analysis eliminates this prolific source of discord and tends toward stabilization of the working force.

4. *Job Specifications as an Aid to Transfers and Promotions.*—Interjob, interdepartmental, and even interplant transfer of employees is a frequent necessity in any well-organized and intelligently administered enterprise. The reasons for this are set forth later.[1] Job study, with its resultant specifications, furnishes information which facilitates intelligent and equitable transfers.

In a similar manner, job analysis contributes to the successful execution of a systematic program of promotions. A general plan of promotion which is not constructed on a foundation of specific and explicit specifications of positions in their proper sequences is foredoomed to failure. Men cannot be advanced from position to position presenting a spiral of responsibilities unless the nature and requirements of higher positions are definitely known. A careful study of jobs not only assures a correct line of advancement but frequently makes possible an escape from "blind alley" jobs by linking them up with positions in the same or different departments which offer greater opportunities.

5. *Job Study and Employee Training.*—Transfer and promotion frequently necessitate special instruction and training of individual employees. It is difficult to conceive of a successful training program in the absence of detailed information relating to the various jobs in the establishment. Positions must be classified, indexed, defined, evaluated, and related if a systematic program of

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[1] See Chap. XVI.

employee training is to be maintained. Men cannot be prepared intelligently unless the nature, duties, and responsibilities of the jobs for which they are being trained are definitely described. The content of the training curriculum, length of the training period, and selection of candidates for training are alike dependent upon an adequate study of jobs.

6. *Job Specifications and Grievances.*—In a very real sense the transcendent purpose of job analysis and job specification is the equitable adjustment of grievances or their complete elimination. The preceding discussion has already suggested that an appreciable amount of unrest in industry is attributable to the absence of adequate information about jobs. Gross inequalities in rates of wages, failure to inaugurate a systematic plan of promotion, favoritism and injustice in the execution of transfers and promotions, inability of department heads to appreciate fully the intricacies of jobs, and lack of intelligent comprehension of human qualities, all create discontent that often develops into serious grievances. The volume of data obtained through job analysis sets forth clearly the conditions surrounding the task which may constitute the causes of the workers' complaints and objections. Because they themselves are often unfamiliar with the minutiae of operations, managers are prone to regard protesting employees as perverse, unreasonable, obstinate, and emotional. Job description conduces to more accurate judgment.

If, as is often urged, misunderstanding is the basic cause of industrial unrest, then, conversely, understanding should be the starting point in any program for industrial peace and harmony. Nothing promotes mutual understanding more than does accurate information about the jobs, their elements, and conditions.

7. *Job Analysis in Relation to Industrial Research.*—An important function of job analysis and job specification is that of aiding the program of research, which is assuming an important place in the administration of modern industry and business. Fundamentally, job analysis and job standardization are service instruments; they are means to an end. The special service functions of job analysis and job specification in promoting the activities of industrial research are graphically presented in Fig. 1.[1] The significance of job analysis in relation to scientific research in the problems of selection and placement, job rating and classification, wage setting and standardization, transfers and promotions, edu-

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[1] Suggested by E. D. Jones in "Job Specifications," *Federal Board foɹ Vocational Education, Bulletin* 45, pp. 11, 12.

cation and training, and the causes and adjustments of grievances has been suggested above. Detailed facts concerning structural and functional aspects of jobs, occupations, and trades are essential to the solution of these problems.

A similarly intimate relationship exists between job analysis and special studies of time and motion elements; health and fatigue factors; causes of industrial accidents; and standards and methods of procedure in machine operation, adjustment, and maintenance.

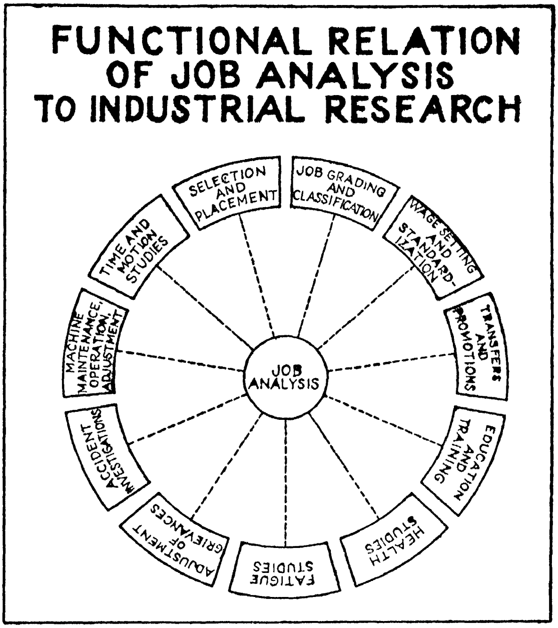

FUNCTIONAL RELATION
OF JOB ANALYSIS
TO INDUSTRIAL RESEARCH
SELECTION AND PLACEMENT
JOB GRADING AND CLASSIFICATION
WAGE SETTING STANDARDIZATION
TRANSFERS AND PROMOTIONS
EDUCATION AND TRAINING
HEALTH STUDIES
FATIGUE STUDIES
ADJUSTMENT OF GRIEVANCES
ACCIDENT INVESTIGATIONS
MACHINE MAINTENANCE, OPERATION, ADJUSTMENT
TIME AND MOTION STUDIES
JOB ANALYSIS

Fig. 1.

Occupational disease and fatigue have their causative roots in the nature of the job or its environmental factors, and an analysis of all causative conditions is fundamental to remedial action. A study of industrial accidents invariably involves an analytical study of the anatomy of those jobs that have a high accident frequency and severity rate. Only in this way can the hazards peculiar to particular jobs and machines be uncovered and proper safeguards devised to reduce accidents. Special studies of time and motion elements in individual jobs are closely associated with the analytical process used in determining job specifications. So true is this that job analysis and time study are frequently identified as synonymous. Finally, it is only by the use of data obtained through job analysis that operatives can be instructed intelligently in the best methods of machine operation, adjustment, and maintenance, and unnecessary wastage and breakage be avoided. Job analysis may appropriately be described as the first step in industrial research.

An Outline of Job Analysis.—If any one of the above purposes of job analysis is to be accomplished, it will be necessary to remember that such an analysis is a decidedly flexible instrument, adaptable to the specific problems of particular establishments or units of the same enterprise. The specifications desired will naturally vary with the needs, and the inquiries initiated by the job study will, as a consequence, manifest a similar lack of standardization. The importance of this fact necessitates its frequent reiteration, since in matters of personnel relations rigid standardization is seldom desirable, and uniformity of procedure and practice is not to be coveted. The following outline of a job analysis, therefore, is intended merely as a suggestion:

I. Preliminary data:
  1. Name and location of department where the job is performed.
  2. Title and symbol of the job.
  3. Line of responsibility and control.

II. Nature of the job:
  1. General characterization.
    a. Mechanical.
    b. Clerical.
    c. Selling.
  2. Nature of the work.
    a. Sitting, standing, or walking.
    b. Posture.
    c. Heavy, average, or light.
    d. Repetitious, monotonous, or varied.
    e. Clean or dirty.
    f. Inside or outside.
  3. Statement of duties and responsibilities.
    a. Major duties.
    b. Minor duties.
    c. Responsibilities regularly associated with the job.
    d. Responsibilities which are more or less irregular, occurring in periods of rush, emergency, or slack times.
    e. Interdepartmental duties and relations.
    f. Contacts with the public.
    g. Relation to other jobs.

III. Equipment:
  1. Machine.
  2. Tools.

    3. Materials.
    4. Uniforms.
    5. Furniture.
IV. Conditions of work:
    1. Hours of employment.
        a. Normal or basic working period.
        b. Time of starting and stopping.
        c. Lunch period.
        d. Rest periods and relief.
        e. Overtime requirements or opportunities.
        f. Sunday and holiday work.
        g. Day work or night work.
        h. Regularity of employment.
    2. Physical conditions of employment.
        a. Heat, humidity, and extremes of temperature.
        b. Light.
        c. Sanitation.
        d. Safety and occupational hazards.
        e. Agreeableness or disagreeableness of the work.
        f. Fatigue factor.
        g. Heavy demands on physical strength, eyesight, endurance.
        h. Work under stress or with comparative ease.
V. Remuneration:
    1. Time or piece rate.
    2. Amount of pay.
    3. Time of payment.
    4. Method of payment—currency or check.
    5. Regulations with regard to rate of pay for overtime, Sunday labor, night work, and holiday work.
    6. Fines for waste and breakage of materials, damage to equipment and machines, tardiness, and absence.
    7. Deductions for hospital, sickness, and other funds.
    8. Profit-sharing, bonus, and pension provisions.
VI. Training provisions:
    1. Place of training—on the job or in separate training department.
    2. Type of training.
        a. Oral instruction.
        b. Graphic presentation.
        c. Written instruction.
        d. Performance.
    3. Length of training or apprenticeship period.
VII. Promotional opportunities:
    1. Place of the job in the organization.
    2. Ordinary lines of promotion.
        a. Understudy jobs.
        b. Related jobs.
        c. Advanced jobs.
    3. Frequency of promotion.
    4. Basis of promotion.
    5. Promotional plan in its functional aspect.
    6. Exceptional opportunities.

VIII. Qualifications required in the worker:
  1. Sex.
  2. Minimum or maximum age.
  3. Race or nationality preferred.
  4. Religious affiliation preferred.
  5. Physical size and strength desired.
  6. Degree of intelligence demanded.
  7. Kind and amount of technical training required.
  8. Degree of skill necessary.
  9. Educational requirements.
    a. Public school.
    b. High school.
    c. Commercial school.
    d. College or university.
  10. Previous experience required.
  11. Personal qualities desired.
    a. Physical attractiveness.
    b. Pleasing personality.
    c. Neatness in appearance and dress.
  12. Special qualifications.
    a. Initiative and ambition.
    b. Accuracy.
    c. Good hearing, eyesight, memory, voice.
    d. Ability to discover details.
    e. Speed.
    f. Carefulness.
    g. Honesty and integrity.
    h. Willingness to assume responsibility.
    i. Loyalty and cooperativeness.
    j. Adaptability and dependability.
    k. Alertness, enthusiasm, aggressiveness.
    l. Fine sense of touch.
    m. Self-control and ability to get along with other people.
    n. Good handwriting.
    o. Leadership qualities.
    p. Good judgment, common sense, tactfulness.

It is obvious that no one position in any organization will exact all of the above requirements, but each of these items, separately or in association with a number of others, will characterize the demands of particular jobs. From this extensive list, a job-analysis questionnaire can be formulated with modifications to suit the needs of the organization.

Method of Procedure in Making the Job Analysis.—There is no universally applicable method of procedure in making the job analysis. The particular method to be used will depend upon various factors, such as the elements of the work to be emphasized, the length of time devoted to the analysis, and the purposes for which it is designed. In many instances, the questionnaire method has proved successful. It involves the sending of a carefully formulated questionnaire to all employees who have not attained executive positions. Accompanying the questionnaire is a letter from one of the officials of the company explaining the purpose of the survey and requesting the fullest cooperation from each worker. These requests for information are sometimes sent first to the departments which are best known to the job analyst and from which he can expect the best response.

The questionnaire method has some shortcomings which cannot be overlooked and which have led many companies to use the committee system. Employees, foremen, and other members of the working force do not like the formality of filling out a detailed statement, and are inclined to think of such a duty as so much unnecessary and impracticable red tape. Moreover, in the stress of duties both workers and executives have little time for careful scrutiny of the numerous questions contained in a questionnaire. For these reasons, it is better that there shall be organized a series of committees, comprising representatives of the personnel department and the rank and file of employees, to which shall be entrusted the responsibility of obtaining the necessary information. These committees are best placed under the immediate supervision of the job analyst, or whoever is in charge of the job analysis and occupational rating in the organization. The cooperation of foremen and operatives on the particular jobs being studied is indispensable for the greatest measure of success. They are the ones most familiar with the peculiarities and requirements of particular units of work and so are best able to furnish accurate data. The task is not completed with the assembling of information. There still remain an analytical study of the facts secured about each job; interpretation, classification, and correlation of these facts so as to construct an actual and reliable unit of measurement; and organization of information in such a way as to make it readily available for determination of standards of performance and pay.

Particular attention must be given to the sources of information. Details are frequently overlooked by the employment manager and the job analyst, whereas such details are apparent to the worker who performs the task. On the other hand, the worker is inclined to lay too much emphasis upon certain elements in the operation and to attach too much importance to them. Often the worker does not understand or cannot explain intelligently certain parts of the job, so that the executive or supervisor in that department must be called upon to furnish the desired information. In order to get complete data it may be necessary to consult a large number of persons, including the master mechanic, efficiency man, spoilage clerk, safety man, physician, supervising foreman, and superintendent. Opinions must be checked in the light of actual observation and care exercised to discriminate between facts, opinions, bias, and prejudice. Upon completion of the analysis it is well to submit the results to departmental heads and others capable of passing sound judgment on the accuracy of the specifications.

Job-analysis data must be put into such form as to make them available for actual use in the organization. Considerable expense has been incurred in job analysis which never received practical application—not because the data were inadequate or the company was unwilling to apply them, but because they were not analyzed and classified for use. Information was placed in the file or on the shelves to become antiquated. It must be remembered that jobs change, and, with the introduction of new methods and processes, old data become unusable. The actual construction of job specifications is imperative if job analysis is to be anything more than a mere fact-gathering venture.

Illustration of Job Analysis and Occupational Rating.—One of the most successful attempts to apply job analysis for the purpose of occupational rating has been made by the International Harvester Company. The corporation had, in 1936, some 28 manufacturing plants in the United States and Canada, giving work to about 45,700 employees. The operations include foundries, forge shops, woodshops, metal-working plants, iron mines, coal mines, timber lands, sawmills, railroads, steamers, and assembling shops. This diversity of industrial functions is as fair a cross section of American industry as can be found in any one organization, and the company's experience demonstrates the usability of job analysis in varied lines of industrial activity.

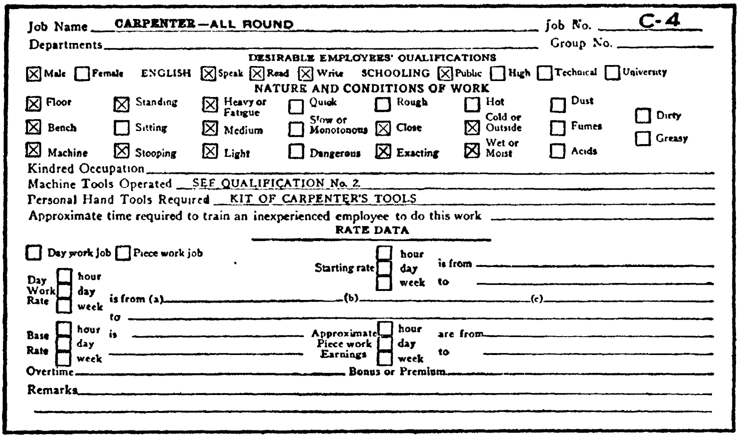
Until a few years ago, no effort was made at standardized job analysis and rate setting. The absence of systematization resulted in a widely varied nomenclature and method in one plant as compared with another, and sometimes even among the different departments of a single plant. No attempt had been made to establish relative values for various occupations. Piece rates had been set by men lacking in experience and were based upon the amount of money that would satisfy the employee rather than upon a quantitative determination of the value of the job. No provision had been made for compensating pieceworkers for delays due to conditions beyond their control. It soon appeared that piece rates were extremely high and daywork ridiculously low in comparison. These conditions are not peculiar to this company. They are typical of American industry. Although labor is a large element in cost, there is less means available for its accurate measurement than is the case for any other factor in production.

It was apparent that such conditions did not produce good will on the part of the employees. A fair and reasonably accurate system of payment was manifestly necessary. But this was impossible without an analysis of jobs and occupations within the organization. Recognition of this fact resulted in the appointment of an occupational rating committee with the manager of manufacturing as chairman, the manager of industrial relations as secretary, and the auditor of manufacturing, and certain works managers and assistant managers as members. Subordinate to this committee was a general committee comprising the assistant superintendent or planning head, the employment manager from each of the eight Chicago plants, and two members of the industrial relations department. This general committee made a preliminary job analysis and formulated therefrom job specifications by which, under names and numbers uniform for all plants, work of an identical character was tabulated and catalogued under approximately 1,000 titles or job categories.

The supervision of job analysis in each plant was entrusted to plant committees consisting usually of the plant superintendent or his assistant, auditor, head of the planning department, employment manager, chief timekeeper, and representatives of the employees' works council. These committes cooperated with the foremen of respective departments. The analysis in each case was made on forms prepared by the general committee. The information sought consisted of the duties of each occupation, the qualifications required in employees for particular jobs, the outstanding undesirable conditions, hazards, and such matters as "safety first" precautions. From the data supplied by the plant committees, the general committee standardized and formulated job specifications for the 1,000 different occupations.

The specification card for each occupation, a specimen copy of which is reproduced in Figs. 2 and 3, lists the occupation title and number; the extent of literacy, education, and physical characteristics required of the applicants; the nature and conditions of the work; personal tools required; kindred occupations; length of prior experience demanded; length of time necessary to train an inexperienced applicant; logical promotional opportunities; rating record; and other important items. The reverse side of the card is devoted to a description of the duties of the occupation and the necessary employee qualifications. The company has not found it necessary to revise this specification form during the past nine years since the analysis was originally made, and the methods originally employed also have remained unchanged.

Every foreman is given a set of cards which includes all the occupations under his jurisdiction. Complete sets are furnished to the superintendent, physician, employment manager, auditor, and planning department. This occupational analysis and rating make possible accurate interplant and interdepartmental comparison of wages, which clearly differentiates skilled from semiskilled mechanics and prevents overvaluating and undervaluating of occupations resulting from the use of incorrect titles.



Job Name CARPENTER—ALL ROUND Job No. C-4
Departments Group No.

DESIRABLE EMPLOYEES' QUALIFICATIONS

☒ Male ☐ Female ENGLISH ☒ Speak ☒ Read ☒ Write SCHOOLING ☒ Public ☐ High ☐ Technical ☐ University

NATURE AND CONDITIONS OF WORK

☒ Floor ☒ Standing ☒ Heavy or Fatigue ☐ Quick ☐ Rough ☐ Hot ☐ Dust ☐ Dirty
☒ Bench ☐ Sitting ☒ Medium ☐ Slow or Monotonous ☒ Close ☒ Cold or Outside ☐ Fumes ☐ Greasy
☒ Machine ☒ Stooping ☒ Light ☐ Dangerous ☒ Exacting ☒ Wet or Moist ☐ Acids

Kindred Occupation
Machine Tools Operated SEE QUALIFICATION No. 2
Personal Hand Tools Required KIT OF CARPENTER'S TOOLS
Approximate time required to train an inexperienced employee to do this work

RATE DATA

☐ Day work job ☐ Piece work job

Starting rate ☐ hour ☐ day ☐ week is from to

Day Work Rate ☐ hour ☐ day ☐ week is from (a) (b) (c)
to

Base Rate ☐ hour ☐ day ☐ week is

Approximate Piece work Earnings ☐ hour ☐ day ☐ week are from to

Overtime Bonus or Premium
Remarks

FIG. 2.—Job specification card (obverse).

The Commonwealth Edison Company of Chicago[1] has laid particular emphasis upon the importance of job analysis and specification. At present the company is engaged in a reclassification program which is administered by a "management committee" responsible for wage and salary control and other matters of employer-employee relations. Detailed operation of this program is in the hands of a "reclassification staff" under the general direction of the management committee. Executives and departmental supervisors participate in this job-analysis program by submitting "position" specifications with recommended titles and rates of pay and by drawing up organization charts showing the respective positions and rates of pay among other employees within the departments concerned.

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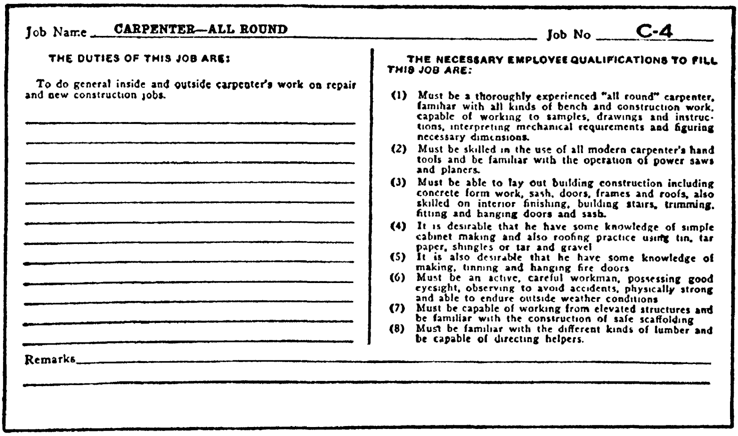
[1] This company is a large power and light producer employing approximately 9,000 persons. The Commonwealth Edison Company and the Commonwealth subsidiary corporations extend service throughout an area of over 200 square miles which contains over 3,100,000 people.

With this information before them, the reclassification staff classifies all of these specifications and watches carefully for possible combinations of positions with similar duties and qualification requirements irrespective of departmental lines. The staff further develops the functional services of the company, such as sales, trades, technical, clerical, and the like, and allocates position specifications to their proper functional services. Then all position specifications within each functional service are graded and rated by means of a rating scale now in process of development. After this has been accomplished, a simple graph is prepared for each functional service, based upon the ratings and rates paid positions in each service. These are used in the development of pay schedules which are built up by considering all relevant factors:



Job Name CARPENTER—ALL ROUND Job No C-4

THE DUTIES OF THIS JOB ARE:

To do general inside and outside carpenter's work on repair and new construction jobs.

THE NECESSARY EMPLOYEE QUALIFICATIONS TO FILL THIS JOB ARE:

(1) Must be a thoroughly experienced "all round" carpenter, familiar with all kinds of bench and construction work, capable of working to samples, drawings and instructions, interpreting mechanical requirements and figuring necessary dimensions.

(2) Must be skilled in the use of all modern carpenter's hand tools and be familiar with the operation of power saws and planers.

(3) Must be able to lay out building construction including concrete form work, sash, doors, frames and roofs, also skilled on interior finishing, building stairs, trimming, fitting and hanging doors and sash.

(4) It is desirable that he have some knowledge of simple cabinet making and also roofing practice using tin, tar paper, shingles or tar and gravel

(5) It is also desirable that he have some knowledge of making, tinning and hanging fire doors

(6) Must be an active, careful workman, possessing good eyesight, observing to avoid accidents, physically strong and able to endure outside weather conditions

(7) Must be capable of working from elevated structures and be familiar with the construction of safe scaffolding

(8) Must be familiar with the different kinds of lumber and be capable of directing helpers.

Remarks

FIG. 3.—Job specification card (reverse).

1. Pay schedules recommended by departments.
2. Service graphs.
3. Company payroll and personnel policies.
4. Labor market conditions and prevailing rates of pay.
5. Cost of living.

The reclassification staff, having completed its major task, finally presents this completed reclassification program to the respective departments for position-specification and pay-schedule approvals, and then the recommended program is passed on to the management committee for authorization and application.

In the Commonwealth Edison Company, specifications for classified service positions are intended to record a clear idea of what each class position represents, to set forth the characteristics which distinguish it from other classes, and to give a definite meaning to the title of the class. There are six basic elements comprising a specification:

1. The *title* or official name of the class.
2. The *statement of duties* which describes the class in terms of responsibilities and duties, listed in the following order:
   - *a.* Degree of direction or supervision received and the degree of supervision exercised, if any.
   - *b.* General statement of the duties, specifying the essential kind or kinds of work performed.
   - *c.* A specific list of the characteristic duties of the position, in order of importance.
3. The *qualification requirements* are to show only the distinctive or special qualifications which an applicant for the position must possess to enable him to perform the duties of the position, listed in the following order:
   - *a.* Special education or training definitely required.
   - *b.* Previous experience definitely necessary.
4. The *principal lines of promotion* show the relationship of the position to positions of higher and lower rank in the same or closely related lines of work (not necessarily within the department).
5. The *immediate superior*, by title.
6. The *salary range* giving the minimum and maximum salary rates suggested for the class, and commission or bonus provided, if any.

In preparing a specification for a class of positions, those responsible are reminded that all parts of the specification must be consistent with each other. For example, a difference in character indicated by the titles of two positions must be supported by a corresponding difference in duties and qualification requirements. Figure 4 presents a sample form of the company's position specification.

Advantages Accruing from Job Specification.—A great many advantages may accrue from job analysis and job specification, some of which have been suggested already in discussing the functions of these instruments. Wage earners have often opposed job analysis on the ground that the results have been used to cut wage rates and speed up operations. For this reason, it has not always been possible to obtain complete information about the best methods of performance. Skilled workmen, especially, have jealously guarded short cuts and easier methods of doing their work. Despite their opposition, there is reason to believe that the workers obtain real benefits from job analysis. It determines and defines standards of work expected of them and specifies the definite requirements of the task, so that they can readily see what qualifications are essential to successful performance. This precludes the placement of workers in jobs for which they do not have the requisite physical and mental capacity and technical training. By simplication of the task, job analysis tends to make mastery and performance easier. In standardizing rates of wages for similar or identical occupations, job analysis protects competent workmen from the injustices which obtain under inequalities. Because it makes possible clearly defined lines of advancement and promotion, job specification furnishes an incentive to the workers. When specification reveals the hazardous characteristics of particular jobs, it aids materially in safeguarding the workers' health and life. Moreover, adequate data are provided for the elimination of these and other disagreeable features of the task, the adjustment of hours to the exactions of the work, and the general improvement of

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SUPERVISOR, BOOKKEEPING DIVISION	Customers Accounts Department Bookkeeping Division 3M (Number and sex of employees)

DUTIES:

Under general supervision, to have responsible charge of the activities of an assigned group of employees in the Bookkeeping Division of the Customers Accounts Department; to plan, direct, and check the work of the group; to be responsible for the training and proper placing of the employees in the group; to handle unusual or difficult cases; to check and analyze production and error reports; to make suggestions and recommendations for improvements in department manual and routines; and to do related work as required.

QUALIFICATIONS:

One or two years' systematic training in accounting; several years' experience with the Company on bookkeeping operations, two years or more of which shall have been in some senior or supervisory capacity; demonstrated ability to plan, apportion, and supervise the work of others.

IMMEDIATE SUPERIOR:

Assistant Revenue Accountant

PRINCIPAL LINES OF PROMOTION:

From: Work Dispatcher, to: Assistant Revenue Accountant

SALARY RANGE:

Minimum: Maximum:

FIG. 4.—Sample form of position specification.

physical conditions of employment. Many of these benefits are indirect and workers seldom appreciate their significance.

The advantages to management are probably more apparent. The efficiency of the whole organization is enhanced through standardization of operations. The work of selection and placement is greatly aided, which permits something approaching scientific precision in bringing the man and the job together. Unnecessary loss of time, motion, and energy is eliminated when the constituent elements of an operation are analyzed and described. The planning and scheduling of work are facilitated. The duties and responsibilities of each job are clearly defined. This avoids the common tendency to shift responsibility. Valuable data are furnished for the systematic development of promotion and transfer plans and other readjustments in the working force, such as the substitution of female for male labor and the placement of a certain percentage of physical defectives. The employer invariably stands to gain from a sound classification and standardization of occupations, the data for which are obtained through an analytical study, since this removes a chronic cause of discord.

A study of a number of firms employing some 14,000 employees and engaged in similar or correlated lines of work revealed the fact that about 204 different names were used in reference to trades that could have been covered by twenty-nine standardized classifications. It was also found that after job analysis had made possible standardization of job nomenclature, requirements, and rates of pay, the percentage of labor turnover was reduced. Job analysis promotes better understanding between foremen and the employment officer because it teaches the former the importance of the human factor in production, and the latter the necessity of recognizing the mechanical factor. Finally, job specifications provide a basis for a more intelligent and sympathetic understanding between management and employees, by eliminating the causes of grievances and by furnishing a factual basis for the adjustment of complaints. In so far as this encourages industrial peace, it may also be stated that the community receives an appreciable advantage from the application of job analysis and job specification.

An example of the practical results of job standardization is to be found in the recent experience of several of the largest American tire manufacturers. During the 4-year period from 1928 to 1931, inclusive, the productivity record of six plants then producing about one-half of the total American output was:

Year	Output per man-hour	
	No. of tires	Weight, pounds
1928	1.05	20.97
1929	1.07	22.80
1930	1.14	26.17
1931	1.37	30.67

In explaining this remarkable increase in production, it is stated that

> The greatest annual increase was during 1931 amounting to 20 per cent in number of tires, and 17 per cent in combined total weight of rubber, chemical ingredients, and fabric. Among the technological changes which caused this rise in man-hour productivity may be mentioned the sharp reduction in labor turnover in the plants, the elimination of the less efficient machines, and less efficient workers, and the introduction of the so-called motion-time studies in several of the plants included in the survey. The motion-time study consists in analyzing to the minutest degree the individual movements and operations each worker is required to make in the process of performing his or her task. The workers are then instructed to follow precisely the requirements set in the time analysis, thus eliminating a large proportion of what is known as waste motion. Automatic machinery and especially automatic conveyors are geared to the standard of output set for the workers around the machine or conveyor. It is frankly admitted by the managers and engineers in charge of operations that during the last year (1931) these motion-time studies have been, more than any other factor or factors, responsible for the increased output per man-hour.[1]

The Job Analyst and His Qualifications.—Job analysis is essentially a planning function. Whatever may be its immediate purpose, its ultimate aim in most plants is to improve the technical efficiency of the whole organization. Consequently, it is normally undertaken by the planning department, if there is one, or by a specialist in job study. The position of job analyst calls for broad qualifications. A personality which commands respect is a primary requisite, since it is necessary for the job analyst to win the confidence of department heads and employees with whom he must come in contact. Skill and tact in approaching and handling people are thus essential. Indeed, the job analyst must be somewhat of a diplomat, maintaining a friendly attitude toward heads of departments and workers alike and avoiding the development of antagonism and suspicion. The work of job analysis is slow and tedious and the results are frequently tardy in developing. Consequently, patience is required to forestall premature discouragement. An analytical mind, impartiality of judgment, keen powers of observation, thoroughness, and common sense are necessary. In addition to these characteristics, the job-study man will find considerable education, technical training, and experience indispensable to success.

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[1] *Monthly Labor Review*, vol. 35, no. 6, pp. 1258, 1267, quoted in *Cost and Production Handbook*, p. 581.

CHAPTER IX

RECRUITMENT OF PERSONNEL

Importance of the Supply of Labor.—Every sound organization, whether commercial or otherwise, must be built in full recognition of the importance of the workers that are to become a part of the organization. A business enterprise may have the finest office, plant, and equipment obtainable; it may have millions of dollars in working capital; these are useless unless the owners have access to a well-trained, intelligent, and loyal supply of laborers.

Because the workers of practically every establishment are in a state of constant flux, the problem of personnel recruitment is a permanent one. In every public and private enterprise, there is a perennial shift in personnel due to voluntary quits, discharges, and layoffs; forced separations on account of illness, marriage, and death; transfers and promotions; and additions for purposes of expansion. Thus, a veritable stream of employees passes in and out of the service of every organization, the volume and flow of which is dependent largely upon the intensity of business activity and the type of labor administration that exists in the organization.

Since this constant flow in and out means much in terms of expense and profit, every employer is seriously concerned with two chief factors: (1) the source of the labor supply, and (2) the rate at which recruitments must be effected in order to maintain an efficient supply of workers. In order to assure an adequate supply, it is necessary to follow the stream of workers back to the headwaters or original sources, that is, to the places from which come the men and women who seek employment. It is a stream of many tributaries, in the flow of which there are all sorts and conditions of persons upon whom rest the responsibility of doing the world's work. Among them are varying degrees of intelligence, temperament, skill, and experience. They differ also in the no less important qualities of character, personality, ambition, initiative, cooperation, honesty, and devotion to duty. What manner of men and women these tributaries will yield for an industry or business often depends upon the source from which they arise. Careful and systematic contacts with desirable sources, therefore, are fundamental to scientific selection and placement.

Influence of Immigration upon American Supply of Labor.—Until recently immigrants have come in an increasing stream from almost every country in the world to seek employment in the labor markets of the United States. Alien labor—skilled, semiskilled. and unskilled—has been a significant factor in our industrial and commercial expansion. In the century between 1830 and 1930, over 37,000,000 people were added to our population through immigration, and, today, approximately 28 per cent of our total white population are either foreign born or born of foreign parentage. In each of the years, 1907, 1910, 1913 and 1914, over 1,000,000 aliens sought greater economic opportunity in this country. Even in the inevitable lull occasioned by the World War, an annual average of about 250,000 aliens arrived. In the years immediately following that great cataclysm (1919–1921), the yearly average rose to almost 500,000. Only since the depression period beginning in 1930, has this great external source of labor supply diminished. Still, there is scarcely an industry in the United States that does not have a large number of immigrant workers, and in many between 50 and 80 per cent of the common laborers are foreigners.

Recent years have witnessed a successful movement for more stringent regulation and limitation of the immigrant tide. On June 3, 1921, a temporary percentage law became operative which provided that the number of aliens of any nationality admitted to the United States in any one year as immigrants would be limited to 3 per cent of the number of foreign-born persons of that nationality residing in this country, as shown by the census of 1910. The quota area included only Europe, Africa, Australia, and the Near East. Because of the numerous exceptions and exemptions provided by the law and the wholesale "bootlegging" or smuggling of aliens into the country, especially across the Mexican border, the new law was a disappointment to the restrictionists. More than 706,000 immigrants were legally admitted in the fiscal year ending June 30, 1924. American employers, who had vigorously opposed the new policy of rigid restriction on the ground that it would destroy the common-labor market, were apparently reassured that the supply of alien workers would continue to be adequate. The American Federation of Labor protested against the manifest ineffectiveness of the new law, and, when the law expired by limitation on June 30, 1924, a more severe regulation was demanded.

The restrictionists won a signal victory, and on May 26, 1924, a new and more stringent permanent measure was approved, which provided for complete exclusion of Japanese immigrants and fixed the quotas from admissible sources at 2 per cent of the number of nationals of each of those countries resident in the United States in 1890, as determined by the census enumeration for that year. Thus, under the new act, immigration from the whole world, with the exception of Canada, Newfoundland, Cuba, Mexico, Haiti, the Canal Zone, the Dominican Republic, and certain independent countries of Central and South America, has become subject to the quota limitations established by this act.

The Immigration Act of 1924 has materially reduced the influx of aliens, since not more than 164,667 immigrants were admitted annually under its original quotas. The law provided that after July 1, 1927, the total annual quota should be approximately 150,000. Present corrected quotas allow a total of 153,774 immigrants annually into the United States, of which 150,275 are to be from Europe (126,000 from the northern and western sections), 1,649 from Asia, and 1,850 from Australia, Africa, and the Pacific Islands.

In the absence of this restriction, the tide of immigration during the postwar period would doubtless have reached or exceeded its prewar level. Of the 4,107,209 aliens admitted during the decade ending in 1930, 2,477,853, or 60.5 per cent, were from Europe; 924,515 and 459,287, or 22.5 per cent and 11.2 per cent, respectively, were from the two nonquota countries of Canada and Mexico. The influx from these two latter countries has gained such momentum that there is still a strong movement calling for the extension of quota provisions to them also. While there seems to be no reason for the alarmist views expressed by many employers concerning the scarcity of labor, the years following the depression period of 1929–1936 have demonstrated that more careful attention may have to be given to new sources of supply within the country and to scientific methods of selection, placement, and maintenance, if an adequate supply of labor is to be assured in periods of industrial expansion.

Considerable improvement in the administration of immigration laws, together with a recognition of the value of proper selection have greatly improved the type of labor gained through this channel This new system has also been made flexible enough to meet emergency labor conditions. During the early days of the great depression it was found wise to discourage immigration into the United States as much as possible. Consequently, under a special presidential edict in September, 1930, prospective immigrants were prohibited from embarking for the United States if there was any likelihood that they might become wards of public or private charity. As a result of this action (still in force in June, 1938), immigration dropped from a total of 141,497 in 1930 to 54,118, 12,983, 8,220, 12,483, and 17,207 in each of the succeeding years through 1935.

Now that the time of an unlimited labor supply from Europe has passed, employers are giving more serious attention to problems of man power. The migration of negroes from the South to the manufacturing centers of the North; the movement of certain industries, as textiles, from New England to industrial centers along high power lines of the eastern seaboard; the increasingly large numbers of Mexicans who have come across the border to enter our agricultural fields, railroads, steel mills, and other important industries—all indicate that efforts are being made to tap new sources of labor or to cultivate old ones more thoroughly. Moreover, thoughtful attention is now being given to the problem of improving labor efficiency by means of scientific management, including stabilization of production, the installation of laborsaving machinery, and the application of enlightened personnel practices, such as careful selection and placement of workers. The substitution of mechanical power for human energy will take considerable time, but scientific labor recruitment and maintenance offer possibilities of greatly increasing per capita production.

What Recruitment Means.—The restriction of immigration is only one factor determining the new attitude of management toward labor recruitment. A second factor is the conviction prevailing in the United States today that excessive hiring and firing entails an enormous economic and human waste. In any program outlined to reduce labor turnover, a position of primary importance must be accorded to proper recruitment, selection, and placement of the labor supply. Far too frequently, however, little or no attention is given to employees until they have become an integral part of the working force in the organization. There is an urgent need for policies that will lead to more careful location of plants and factories, the discovery of adequate sources of desirable employees, and successful ways and means of tapping these sources.

A solution of the problem of labor supply has its inception in proper localization of the plant. Factories are usually established in great centers of population or accessible suburbs where the necessary kinds of workers are available. Frequently, however, they are built in remote communities with the intention of getting away from the labor disturbances which constitute the perennial nightmare of the city employer. These firms hope, of course, that workers will follow, weary of the congestion of the urban community and desirous of the open air and the sunshine of the country. An excellent illustration of this trend toward decentralization is to be found along the rural districts of eastern North Carolina and Virginia where new textile mills and tobacco factories have been constructed in the open country; and at Hershey, Pa., where a whole modern community, including schools, stores, dairies, and homes, has been built around the Hershey plant. But workers do not always manifest a desire to exchange the gregarious possibilities of the industrial metropolis for the isolation and the seemingly more healthful environs of the small community. For example, a businessman who desired to establish a typewriter factory disregarded advice that he locate in the vicinity of Chicago and proceeded to build in a rural community of a neighboring state, taking with him his own employees. It was soon apparent that the workers gravitated back to the city, and the rate of labor turnover was so high that the project was eventually abandoned. It is necessary, therefore, to adopt a definite policy of locating plants and offices only where an adequate supply of labor is available.

In formulating policies governing the recruitment of the labor supply, the following principles must be definitely established:

1. The exact responsibilities and functions of the personnel department with regard to procuring employees must be defined.
2. The company must have reached definite conclusions concerning the desirability of giving careful attention to problems of labor recruitment; the character, type, and kinds of workers desired; and its willingness to finance adequately the work entailed in establishing effective contacts with sources of prospective employees.
3. The company must define its position with regard to the recruitment of relatives and friends of present executives and wage earners.
4. The right kind of employment supervisor must be selected. A large amount of authority cannot be given the employment manager until he is familiar with the departments and classes of help needed. This means that he should be a man of broad experience and, wherever necessary, a man of special technical education. To practical experience must be added good judgment, tact, and common sense.
5. The employment department itself must have a clearly defined policy, must prepare a workable type of application blank, devise the best ways and means of making contacts with labor sources, function always as the clearing house for all labor throughout the plant, be untrammeled by excessive rules and regulations, and be free from the necessity of giving employment to favorites of executives and employees.
6. The establishment and maintenance of decent standards of employment —good wages, reasonable hours, and safe and sanitary conditions—are primary

requisites of a successful recruitment policy. Moreover, honest representation of employment conditions, of the tenure of the position, and of the possibilities for advancement is imperative. Nothing so quickly destroys a company's reputation as misrepresentation or overrepresentation of positions. It is better to undersell than to oversell the job and the organization.

The Community Survey.—Standardization of the kinds of workers required and classification of available sources of supply are the essentials in the actual work of labor recruitment. Standardization of types of jobs develops from job analyses and specifications, which were discussed in an earlier chapter. Classification of sources of labor is the immediate task of the employment office. In the organization of these sources the community survey is a useful instrument and, when supplemented by intimate knowledge of the labor market, makes for efficient recruitment. Some firms employ a social worker who canvasses employees' homes to list all children, together with their ages, school grades, and desirability as future employees. By means of this list, which is kept up to date, children are followed until they leave school and then are offered employment in the plant. Others through systematic tabulation of statistical data obtained through federal census, schools, and other agencies carefully analyze the present and potential labor markets. Advertising is sometimes used in an effort to have young people invite a representative of the company to discuss with them and their parents the advantages of employment with the company. Care must be exercised here not to make offers of employment to children who should remain in school rather than be induced to enter industry prematurely.

When concerns do make a community labor survey, the investigation is not confined to young persons but includes a general classification of all available sources. The large industrial centers of the United States have more or less definite population areas or districts, divided on the basis of race and nationality. When systematically and intelligently charted, these sources can readily be tapped. Such a survey is an especially helpful preliminary to plant location and can easily be made through the medium of house-to-house canvass supplemented by consultations with school superintendents, teachers, clergymen, tradesmen, public officials, old residents, and charitable societies.

Outline of Sources.—From what has been said, it is evident that positions cannot be filled with well-qualified employees unless definite machinery exists for the systematic discovery, classification, and tapping of the divers sources of labor supply. Generally speaking, these comprise: *internal sources,* such as present employees, stockholders, and friends of present executives and employees; and *external sources,* such as former employees, voluntary applications, schools and colleges, advertising, labor scouting, private employment agencies, public employment exchanges, fraternal, religious, and benevolent institutions, union headquarters, and the employment offices of other concerns.

Present Employees.—The present working force is the most immediate, convenient, and best source of recruits for vacant positions in any establishment. As a general policy, it is a serious mistake to take in employees from the outside when there are competent workers within the organization who are fully qualified to fill vacancies or who can, by very little training, prepare themselves for such positions. Other things being equal, therefore, present employees should be accorded preference over outsiders. It is the policy of all progressive concerns to build up permanent employment and long service records by means of definite transfer and promotional plans which give present workers ample opportunities for adjustment and advancement. In this way, workers who have been improperly placed are assigned to other positions more to their liking and for the performance of which they are better qualified, and efficient and loyal workers are promoted on the basis of merit.

The filling of vacancies from among present employees, however, necessitates sytematic records; otherwise, transfers and promotions will be made merely on an impressionistic basis and frequently on the basis of partiality and favoritism. Follow-up files, such as the qualification card and rating sheet, which are discussed in later chapters, are necessary instruments for the recording of data relative to experience, qualifications, growth, and progress. Promotional possibilities and the need for transfers are clearly set forth in these records. Provision is made for competitive examination, and all employees who feel that they are capable of higher and more responsible positions are encouraged to have their abilities tested. Service records should supplement whatever tests are administered, because it is only by such records that abstract qualities of character, loyalty, leadership, and dependability of the employee can be measured.

Recruitment from present employees has some serious dangers if carried to extreme limits. A successful manager once said that he was glad to see men and women leave the service of his company because new employees brought into the organization greater assets in energy, attentiveness to duty, and enthusiasm than old employees took away. He added, moreover, that when employees left the organization it usually meant that they were going to better themselves. Such an attitude is extremely optimistic and totally disregards the costs incident to labor turnover. Nevertheless, it cannot be doubted that new blood is a valuable factor in the efficiency of an organization. Workers who have been in the employ of a company for a long period of years often possess the feeling that they can hold their jobs without reference to efficient service. Change provides a stimulus and may yield benefits to both employer and employee. There is such a thing as overstabilizing the working force. New blood, however, is not necessarily good blood, and the best does not automatically flow to any given company. The progressive personnel department should, therefore, establish formal contacts with outside sources of labor supply in order to assure successful accessions to the working force.

Friends of Present Employees.—The friends of present employees are one of the most valuable sources of new workers. The productiveness of this source of supply is an acid test of the plant's popularity. Satisfied workpeople are the most valuable advertisement and recruiting factor a company can possess. If an employee likes his position, wage, treatment, and organization, he becomes an emissary of good will. Adverse reports and a bad reputation spread with equal rapidity. Good wages, decent conditions, fair treatment, and promotional opportunities constitute first essentials in a successful recruitment program. Some concerns, whose experience has proved this to be a most satisfactory source of new employees, encourage their workers to bring their friends into the service of the company by offering a cash bonus, provided the new employee proves satisfactory and remains with the company for a given length of time. Generally speaking, friends and relatives are likely to bring to the plant a correspondingly good type of worker. People like to work where they have friends and acquaintances and welcome an invitation to enter such plants. As a means of stimulating this form of recruitment, some companies occasionally distribute to their employees application blanks to be passed on to their friends.

In recruiting from this source, certain precautions are necessary and are always taken by the best managed employment departments. Favoritism and ill feeling can easily creep into such recruitment. Some companies will employ no one who has a relative in the organization in any capacity. This policy is adopted to avoid the danger of favoritism and to escape the necessity, which is bound to arise, of hurting the feelings of employees whose relatives cannot be accepted because they do not meet the company's standards. Many companies, however, do not object to the recruitment of relatives, but insist that present employees who recommend friends or relatives fill out a blank stating the reasons why these individuals will make desirable additions to the working force. Every effort is made to cultivate a feeling of responsibility in this matter, so as to reduce to a minimum the danger of suggesting unsuitable workers. It is made unmistakably clear, moreover, that each applicant recommended by present employees will be subject to the same thorough interview and impartial scrutiny of the employment office as are given to workers recruited through other channels. With these precautions, there is little reason to fear that executives and employees will try to bring in undesirable and incompetent relatives or friends.

Former Employees.—Frequently employees are forced to leave the service of the company by circumstances such as illness, marriage, or family migration. The death of a mother often makes it necessary for young women to leave their regular employment for the purpose of keeping house and caring for younger children. Other workers leave, tempted by offers of higher wages and greater opportunities for advancement. Sometimes they are disillusioned and become dissatisfied with their new environment. The new work and working conditions are not what they hoped for; they long for old workmates and the old machine, and desire to reconnect with the old concern. If they do return, old employees usually prove better workmen and are more contented and loyal. Records of employees who leave the service of the company are kept for future reference, and those who have left in good standing are eligible for reemployment. The records of many companies show reemployment of as high as 25 per cent of their former employees. In pursuing a policy of reemployment, however, care must be exercised not to create the impression that the worker may leave the company and return at will; such action might add appreciably to the cost of labor turnover or weaken morale and efficiency.

Voluntary Applicants.—To every employment office there comes unsolicited an intermittent stream of men and women seeking employment. Not everyone who comes is a desirable prospective employee. Many are habitual "peddlers of labor," but others are excellent workmen temporarily unemployed. The names of desirable applicants for whom there is no immediate opening should be filed, and those whom it is necessary to send away without filling out a card should be dismissed with courtesy, but not with false hope. This is a policy widely adopted by progressive American firms. Many persons already employed, but who wish to better themselves, apply through the mail. These applications should receive careful and courteous attention. When vacancies occur for which applicants in the prospect file apparently are qualified, they are given an opportunity before other outside sources are touched.

Many companies do not file applications from any persons whom they cannot employ at the time of application; others go to the extreme of hiring only from filed applications; that is, their policy is confined to "hiring from the shelf," as it is called. In the case of unskilled and semiskilled workmen, applications soon become "dead" unless there are special reasons why these individuals desire to enter the service of the specific company, such as convenient location, personal ties, or attractive employment conditions. Such persons are seldom available after a few days, except under these special circumstances. In the case of skilled and higher grades of technical workers, these files remain "alive" for a longer time because, although usually not unemployed for an extended period, these workers are always eager for better positions than the temporary ones they are forced to fill during slack times.

Hiring from the shelf has many advantages. For the applicant it is an economy of time and money. If he is already employed but is seeking a better position, he does not have to lay off to inquire about the prospect of a vacancy. The employment office has data as to his qualifications and if, after consulting his application blank, he appears to be capable of filling the position, he can be called by telephone. For the company there are many benefits. When an adequate file is maintained, it is unnecessary to depend upon peddlers of labor who chance to be on hand when a vacancy occurs. The right man is seldom picked up in this way. Then, too, an application file properly maintained enables the company to keep in touch with desirable workers who happen to apply when positions are not available. It will raise the standard of applicants, provided a reasonable number are sent for after filing applications, because good workmen will learn that time is not wasted in dropping in to inquire after jobs. Labor turnover is reduced because only those workers are recruited whose qualifications, experience, and records have been verified. Finally, such a file saves money for the company, because the expense of maintaining it is small compared with that involved in extra scouting and advertising, which are necessary when no available applicants are in sight.

Institutions of Learning.—Each year a long line of youths files out of grammar schools, high schools, technical schools, colleges, and universities to take places in the industrial, business, and commercial life of the nation. Here is to be found the largest source of employees. The most enterprising concerns now establish contacts with these institutions. Some send special representatives of their employment departments to recruit young people from these sources. Each year representatives of large national organizations such as the American Telephone and Telegraph Company, General Electric Company, International Business Machines Corporation, United States Steel Corporation, Goodyear Tire and Rubber Company, and others visit the leading universities of the country in a nation-wide search for the highest type of university material obtainable for the future needs of their respective organizations.

Many firms have adopted the policy of providing a number of places each summer for students. The employment departments of some establishments are in touch with the principals of all schools in the community and keep them informed of employment needs. Quite recently universities and technical or trade schools have established full-time placement or occupational bureaus whose directors attempt to maintain constant touch with the labor market in the interest of placing well-qualified graduates and needy students in full-time and part-time positions. Many students in schools and universities have had considerable experience, and with intensive training can readily be adapted to the needs of a given firm. It is a serious reflection on our educational and industrial systems that hundreds of thousands of these youths are vocationally undirected and allowed to drift into uncharted channels of economic activity, in the vague hope that by chance they will find proper placement.

Private Employment Agencies.—Organization of the labor market has been effected in part through the functioning of private and public employment agencies. There are two general types of the private agency; the free private agency, and the commercial employment bureau. Practically every industrial city of the nation has some type of philanthropic service agency which charges no fee for placement activities. Sometimes these are maintained by fraternal societies, churches, educational institutions, or by the generous endowment of a public benefactor. Too often, however, because of limited financial resources and scope of activities, their functioning exerts an all too small influence upon the efficient organization of the various phases of the labor market.

The best known private agency is that of the commercial employment bureau, of which there were estimated to be approximately 5,000 in 1932 throughout the nation. In 1930, 1,036 were registered as operating in New York City, 315 in Chicago, and 191 in Philadelphia.[1] At the end of 1936, there were still in operation in California about 300 private commercial agencies in addition to a number of nonprofit but dues-charging agencies.[2]

These agencies, operating for the purpose of private profit, take millions of dollars annually from the pay envelopes of their clients. Only a few of the commercial agencies specialize in certain types of labor; as, for instance, certain skilled and semiskilled trade workers, teachers, musicians, and nurses. The private employment agency which is operated only as a moneymaking institution is a source of labor that has played a dominant role in the recruitment of workers in American industry. To employers and employees alike, it is usually the most costly of all sources of labor supply.

In the absence of state or federal regulation, some private commercial agencies have rendered notable and reasonable service, but by far the majority have entered into discreditable practices. Often men are shipped to distant points only to find that no work exists, or that wages and conditions of work are not as they had been represented. Agencies have not infrequently collected a double fee by charging both employer and the worker. Sometimes dishonest practice has led to the splitting of fees between agency and employer, or the constant hiring and dropping of workers in order to collect the placement fees. During the year 1934, over 2,000 complaints were registered with the license commission against commercial employment agencies located in the city of New York.[3] Other evils of the system are suggested in the words of Governor Lehman:[4]

> Although there are many honest and high-minded men and women conducting private employment agencies, it is unfortunate that certain

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[1] COMMONS, J. R., and J. B. ANDREWS, *Principles of Labor Legislation*, 1936 ed., pp. 6–7.

[2] California State Employment Service, *Administration of Unemployment Compensation*, 1936, Chap. XIX.

[3] COMMONS and ANDREWS, *op. cit.*, p. 7.

[4] Governor Lehman, of New York, in his message to legislature, Jan. 1, 1936, reprinted in *American Labor Legislation Review*, March, 1937, p. 34.

unscrupulous fee-charging employment bureaus continue their many forms of exploitation and fraud of thousands of wage-earners who seek employment through them despite repeated heart-breaking experiences with such agencies. Applicants for work through these agencies have been charged exorbitant fees, have had all sorts of deductions made from their wages; have been sent to non-existent jobs and marooned in strange communities with no money for meals, bed or transportation; have been sent to jobs from which they were automatically discharged after working long enough to pay the agency fee; and in some instances girls and women have been recruited for vice.

State-wide regulation, far from handicapping reputable employment agencies—will give such agencies protection against racketeering competitors. Reputable agencies should welcome effective state-wide regulation.

The cost to the employer is less definite and measurable but not less real. There is a conspicuous absence of discrimination and interest in recommending employees. There are innumerable instances in industrial experience where workers have been shipped to plants regardless of qualifications and fitness for the work. The loss to one construction company which, in a period of great labor shortage, called on private profit-making agencies was put at $1,000 a month. Moreover, when the labor market is in their favor, men insist on a wage high enough to cover the agency's fee, so the employer bears this added cost, or passes it on to the consumer through higher prices for the product. Progressive concerns do not usually resort to this source of labor supply except in an emergency, unless, through the service, it is possible to secure unusual workers at a reasonable cost. Other sources invariably will prove less costly wherever they can be used.

The weakness and evils of the system of commercial agencies are gradually being checked in part through state and federal supervision of activities. In many states, restrictive legislation limiting the maximum fees chargeable, preventing extortion, and insuring moral protection has already been enacted.[1] All fee-charging agencies, except those operating in the provinces of New Brunswick, Ontario, and Prince Edward Island, are prohibited by law from operating in Canada.[2] There can be little doubt that the various states of the union are within their constitutional rights in licensing and regulating private agencies. In making recommendations for uniform state legislation, the Committee on Legislation of Private Employment Agencies recently urged that all private commercial agencies should be charged an annual fee; that employment agents so engaged be bonded to insure full protection of workers; that careful investigation be made before granting licenses so as to insure suitable premises and an acceptable reputation on the part of those in charge; and that fee splitting, false advertising, the sending of workers to plants on strike without notification thereof, the making of placements in violation of other state labor laws, and certain other objectionable practices be prohibited.[1]

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[1] "Laws Relating to Employment Agencies in the United States," *United States Department of Labor, Bulletin* 581, Jan. 1, 1933.

[2] Commons and Andrews, *op. cit.*, p. 8.

Public Employment Exchanges.—Another force tending to check the evils of the commercial employment agency is the increasing competition offered by public employment exchanges. The public employment bureaus of such countries as England, Canada, France, and Germany, and, more recently, those being organized throughout the United States, have done notable work and are becoming well-established institutions. In England, for example, public employment exchanges, established under the Labour Exchanges Act of 1909, had developed to the point where, on Jan. 1, 1933, there were no less than 420 permanent full-time employment exchanges and 747 branch offices rendering free employment service to every part of the British Isles.[2] An indication of the scope of the work done by the exchanges in supplying labor where needed is found in the fact that out of approximately 1,125,000 vacancies notified in 1932, the exchanges made 1,086,000 placements, or 92 per cent of the total.[3] In the larger cities, more than one office has been organized—in Manchester there are nine such offices; in London there are fifty-six. Free public employment bureaus were first introduced in Germany in 1840, when a subsidized office was established in the city of Dresden. In 1930, almost 1,000 branch offices successfully placed 154,000 salaried employees, which was 72 per cent of all those placed by public and noncommercial private agencies during the year.[4]

Following the wartime experience with public employment services, the development of public employment exchanges in the

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[1] United States Department of Labor, Division of Labor Standards, *Reports of Committees and Resolutions Adopted by Third National Conference on Labor Legislation*, Nov. 9–11, 1936, pp. 16–17.

[2] CHEGWIDDEN, T. S., and S. MYRDDIN-EVANS, *The Employment Exchange Service of Great Britain*, p. 81.

[3] *Ibid.*, p. 176.

[4] WEIGERT, OSCAR, *Placement and Unemployment Insurance in Germany*, p. 107.

United States was very slow until the Wagner-Peyser Act became a law in June, 1933. When this act was passed there were twenty-three independent state employment services operating a total of 192 offices in 120 different cities throughout the nation. The Wagner-Peyser Act provided for a nation-wide system of free public employment exchange bureaus maintained through the United States Employment Service. The chief function of this new service is to assist, by means of federal grants-in-aid, in establishing and maintaining systems of employment exchanges in the various states, develop and prescribe standards of efficiency, assist local communities in meeting problems peculiar to their localities, provide uniform statistical procedure, and conduct research in employment opportunities. The responsibility of carrying out a national reemployment program for the benefit of those unemployed during the depression was later added to the duties of the service. This obligation, however, was temporary in nature, while the major functions from the first have been incorporated in a permanent national employment service program.

By June 30, 1936, thirty-five state employment services had become affiliated with the United States Employment Service.[1] These states operated a total of 247 district employment offices together with forty-nine branch employment offices. The passing of this federal law greatly strengthened the employment activities of old organizations where state systems previously operated. In California, where state public employment offices had been maintained by law since 1915, there were in operation at the time the Wagner-Peyser Act was passed thirteen free employment offices together with free municipal offices in Long Beach, Santa Monica, Berkeley, Palo Alto, and Pasadena. The new federal law made it possible for this system to be simplified and expanded considerably under a federal grant of some $138,000 annually.[2] The value of such an expansion from both the workers' and employers' points of view is evidenced in the fact that the new act has allowed the Pasadena office to branch out into not only more intensive employment services, but vocational counseling and occupational testing work as well—a development that is bound to bear fruit in the future.[1]

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[1] The states were Arizona, California, Colorado, Connecticut, Delaware, Florida, Idaho, Illinois, Indiana, Iowa, Louisiana, Massachusetts, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, Wyoming; at the end of the fiscal year, forty-three states had accepted the provisions of the Act. (*Annual Report of the Secretary of Labor*, fiscal year ended June 30, 1936, pp. 35–36.) By Dec. 30, 1936, two other states, Alabama and South Carolina, had completed application with the United States Employment Service.

[2] California State Employment Service, *Administration of Unemployment Compensation*, 1936, Chap. XIX.

Recent reports of the United States Employment Service show clearly how important an agency in labor recruitment these free public exchanges are becoming. During the first three months of 1937, almost half a million (495,710) placements with private employers, exclusive of all types of government work, were reported by the various offices of the service.[2] During the first nine months of the fiscal year ending June 30, 1937, a total of 1,416,864 private placements was reported. In addition to these, many thousands were assigned to public works programs or relief work by the service, which, during the emergency unemployment years since the law was enacted, has been called upon to carry the burden of government and relief placements along with its private placement program. Within the fiscal year ending June 30, 1935, the United States Employment Service offices registered and classified 4,115,779 new individual applicants making a two-year total registration of 16,750,753.[3]

When properly managed, public employment offices provide an effective medium for recruitment not only of unskilled, but of skilled and technical employees. In recent years, their efforts have been extended to centralization of the labor supply and its most economical distribution. Because they have a network of offices throughout the state or nation, public employment bureaus have their fingers constantly on the pulse of the labor market, can thus recruit labor when it is available and as needed without interfering with industrial activities in other localities, and can issue frequent reports advising both employers and employees with regard to the status of the labor and employment market.

Considerable criticism, often justifiable, has been made of public employment bureaus on the grounds that they are controlled by politicians and manned by political favorites unqualified for this important work. As tax-supported institutions they should be operated neither for the advantageous placement of organized workers nor as strike-breaking agencies. The best bureaus are now under control of a joint board of representatives of employers, employees, and the public, and are staffed by well-qualified persons serving under civil service appointment.

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[1] "Pasadena Combines Placement and Counseling," *Employment Service News*, March, 1937, pp. 5–8.

[2] United States Department of Labor, *Monthly Labor Review*, May, 1937, p. 1271.

[3] United States Department of Labor, *Handbook of Labor Statistics*, 1936 ed., p. 119.

Care is exercised not to misrepresent or conceal any unfavorable facts about jobs. In England, railroad fare is advanced to those who are placed. Many agencies in the United States, some of which, until recently, were supported by funds contributed by city, state, and private sources, have gained the confidence of employers and unions. Both employers and workers are investigated, especially when girls are placed. Many of the offices use the best methods of highly developed employment management, including standard job specifications, intelligent interviewing, and trade tests. By increasing their examining force and following up for a considerable period the applicants placed, more successful selection and assignment have been achieved. Frequently, those who interview and register workers are lacking in the necessary technical knowledge of the industries with which they deal. There is room for considerable improvement in this particular both in the United States and abroad.

Public employment exchanges so far have not displaced other methods of finding work nor other sources of recruitment. They have not been used extensively by members of highly organized crafts or by the highest grades of unorganized workmen, but workers in the unskilled occupations have used them quite generally. Employers have not made so wide use of the offices as they deserve, largely because of the suspicion that they are not efficiently and fairly managed, or because of the types of workers registered during the years following 1933. Unfortunately, too often in the past workers sent out by the public exchange have lacked physical, mental, or occupational fitness; they have arrived after the job had been filled; or they have been so broken in morale that they could not do a fair day's work. With the application of scientific principles of interviewing and placement in public employment exchange administration, more reliance is being placed on this type of service, and it promises to offer a major source of supply in the future.

Advertising.—There is considerable difference of opinion with regard to newspaper advertising for employees. When other sources prove inadequate to fill their labor needs, even the most progressive firms find it necessary to resort to advertising. Many concerns use this as the chief source of labor supply, and, although they admit it is expensive, they contend it is effective. Some employers assert that newspaper advertising has never failed to bring forth at least one applicant whose qualifications were such as to make possible immediate adaptation to their needs. Other employers never use this means of recruiting employees. They insist that it is an extremely undesirable source because it costs enormous sums of money annually, is a wasteful system of distributing labor, results in competition for workers and so raises wages, and, by calling attention of a company's employees to scarcity of labor in the plant, tends to lower efficiency. One firm employing about 20,000 persons had been a big user of the advertising columns. Newspaper advertising was discontinued, but no difference was found in the number of people who came to the employment office in search of work.

Nevertheless, the familiar "Help Wanted" and "Situations Wanted" columns of the daily newspapers are among the most commonly used methods of recruitment and are probably unsurpassed as a source of young and semiskilled help. Until a more adequate substitute is found, their popularity will continue. From the standpoint of acceptable standards of employment practice, their greatest weakness lies in the fact that they are not discriminating and entail great expense in weeding out undesirables. Then, too, competing employers are tempted to offer illusory attractions in employment conditions. This results in a futile interchange of employees without conferring lasting benefits upon the firm or the applicants for work. Workers are often induced to go on a wild-goose chase for jobs only to find that a hundred others have read the same advertisement and that comparatively few vacancies existed.

The blind or unsigned advertisement, which is used by many employers, automatically eliminates a number of hopeless and undesirable individuals who would not take the trouble to make written inquiries. It has the tendency, however, of defeating its own ends in that it does not attract the best type of worker—the one who is already employed. He wants to know that he is not applying to his present employer. Workers are suspicious of blinds because employers have sometimes used such advertisements to test the loyalty of their own employees.

Companies that enjoy an enviable reputation for fair treatment of their employees use only the "open" or signed advertisement, inserting their names in all cases and capitalizing the reputation which years of humanized management have accumulated. This is especially true of construction companies, which find that recruitment of an adequate and desirable labor supply is not difficult if they have a reputation for providing good barrack or bunkhouse accommodations and excellent commissary service. Concerns with an enlightened personnel policy not only insert their names but give general information concerning the average length of employees' service with them, the provision of locker rooms, shower baths, cafeteria, club rooms, recreational and social opportunities, safety and sanitary conditions, hours, wages, bonuses, and benefits. Some companies insert an invitation to parents or wives to visit the workrooms or factory and inspect "clean, wholesome, happy surroundings." The workshop "overlooks the lake," has "no dangerous machinery," involves "no carrying of heavy bundles," provides "a square deal for everyone," gives "employees a voice in running it," and provides "opportunity for creative workmanship." In addition to "Help Wanted" columns, the plant paper, trade journals, bulletin boards, radio, and other media, are used for recruiting purposes.

Scouting.—In periods of extreme labor scarcity industrial concerns find it necessary to engage in "scouting," by dispatching special recruiting agents or regular members of the employment department to competitive or distant localities to search for available workers. Since the enactment of more stringent immigration laws, labor scouts have been very active in the Southern states and Mexico, where Negroes and Mexicans have been recruited for the iron and steel and other industries of the North. Scouts frequently distribute leaflets which give the name of the company, the opportunities for employment, the list of trades and jobs open, hours, wages, overtime pay, bonuses, and directions for reaching the plant. Often scouting is done through a member of the race or nationality which is being recruited, the scout in this case being paid so much a head for new workers brought to the plant.

Scouting is effective only as an extreme emergency method, since it prohibits the careful selection necessary to build up a stable force. Moreover, there is always the danger that labor scouting will degenerate into the practice of labor stealing. Thousands of workers are "kidnaped" from other concerns by labor scouts, and sometimes, as during the World War, the labor market is completely demoralized as a consequence. To take employees away from competitors on a purely wage basis is generally viewed by the best employment departments as an unwholesome and expensive practice. Experience indicates that a man who repeatedly leaves one concern to go to another for money considerations will be just as discontented in the new place as in the old. When he leaves for reasons of general improvement of his status, including the opportunity for advancement, and does so in a friendly way and after due notice, the results are usually better. Some employment departments have been known to refuse work to employees of their competitors, so strong an aversion did they hold against labor stealing. It is manifestly unfair, however, to apply such a policy if the applicant is frank and aboveboard when leaving the service of his old employer. A wage earner is just as much entitled to sell his services in the most favorable market as the employer is to sell his product in such a market.

As in the case of advertising, labor scouting, despite its deficiencies, is an established method of recruiting workers. It will continue as long as emergencies arise in industry and various states lack a more scientific and efficient system of labor distribution, such as the United States Employment Service closely coordinated with well-developed and proficiently managed state and local employment bureaus. The value of such a system for the United States was learned during the World War, but the failure of Congress to appropriate adequate funds reduced it to a skeleton of its former self. Since the passage of the Wagner-Peyser Act of 1933, the value of public employment bureaus has been realized again.

An acceptable system of scouting must be accompanied by adequate wages, decent hours and conditions of employment, good housing and living conditions for men and their families, a reputation for fair dealing, and an enlightened personnel program. The men who are to do the scouting must be selected with care. They must be men who are technically qualified to recruit and select the kind of labor needed, whose personalities inspire confidence, and who are not unscrupulous salesmen willing always to oversell the job in order to get the men. The desirable scout is not found in professional recruiting offices outside the company's organization. Yet many companies make the mistake of seeking help through the professional scout.

The labor scout must have at his disposal adequate financial reserve to assure prompt shipment of men, must be familiar with state statutes governing labor recruitment by outside agents, should be given credentials to public employment bureaus in the states he is to visit, should be given power to engage local physicians to examine the men recruited, should take good care of his men in transit, and should have each worker sign a card which specifically sets forth the terms of employment. These precautions will avoid the embarrassment of losing men on account of delayed shipment, assure compliance with the laws of the state, and guarantee that the men who are recruited are physically capable of doing the work required of them.

Cooperation between Employment Departments.—Where there has been developed a desirable measure of cooperation among the employment departments of different companies, there is voluntary mutual exchange of information about prospective employees. If an employment supervisor of Company *A* is unable to place a seemingly desirable applicant, he telephones the employment office of Company *B*, *C*, or *D* and calls the attention of his friends to the applicant. Similarly, when a deserving employee finds it necessary to move to another community, the employment manager sometimes makes it his business to send the name of the person to the employment office of the company's plant in that community, if it has one there, or to the employment office of some company of his acquaintance.

Sometimes this cooperation takes on an even more important form. In many of the nation's industrial cities, the local chambers of commerce sponsor weekly or bimonthly meetings of an employment managers' or personnel managers' association. At these meetings, it has often become a routine, but valuable, procedure to call for statements concerning employment opportunities. In this simple but direct way, the association serves somewhat as a "clearing house" for the placement of surplus labor or the recruitment of new labor, according to the needs of the individual company.

Miscellaneous Sources.—In addition to the foregoing sources of new workers, there are certain others which are used frequently, but which are, for the most part, of relatively less importance. Every labor union maintains a list of its unemployed, and some operate placement offices. In this way, employers are put in touch with available craftsmen. In preferential shop agreements, which provide that in case of a vacancy a union man is to have preference, employers are required to recruit through union headquarters. An illustration of this source of labor supply is found in the "dispatching" or "hiring" halls of the maritime unions where each day the men available for work report and are dispatched to the stevedoring companies and ship companies as requested. Into every town and city, there come migratory craftsmen—printers, bakers, barbers, carpenters, bricklayers, and others—who are temporarily unemployed and who register at the headquarters of their particular union.

Charitable organizations, as agencies of the community chest and associated charities, make a business of finding employment for the more or less unfortunate who come to their attention. Ministers, priests, and rabbis are frequently in touch with members of their congregations who desire work. Fraternal organizations often conduct an office for the placement of their members. Considerable care must be exercised in recruiting through these philanthropic and fraternal agencies, because sympathy and favoritism play a large part in the description of the applicants' qualifications. The men who seek jobs through these agencies are often men who have failed miserably in economic life. An employment manager in an enterprise of some size ventured the statement that 90 per cent of the employees he had recruited through charitable sources had proved undesirable. On the other hand, excellent material is sometimes available through all these sources. Applicants coming from them may have excellent moral and economic qualifications and may make desirable employees.

In addition to chambers of commerce and employment managers' associations, the offices of manufacturers' and employers' associations frequently are in a position to suggest available workers. Union workmen look upon these with more or less distrust, so that workers for highly organized trades are rarely recruited through them. Sometimes the offices of employers' trade associations have been used as agencies for recruiting workers to break strikes and make effective a blacklisting scheme, so that suspicion is well merited. In a recent strike of the Teamsters and Truck Drivers Union on the Pacific Coast, a local association of manufacturers in one industrial center attempted to open up a nonunion hiring hall where the services of truck drivers could be obtained to defeat the union strike. In such cases, they seldom furnish able and efficient workmen. For the professional detective bureau which makes it a business to supply the "right kind" of labor in emergencies, such as strikes and lockouts, even less good can be said from the standpoint of enlightened employment practice. In large industrial centers, various branches of the Y.M.C.A. do some excellent work in placing men, many of them high school and college graduates who come to the cities in search of larger opportunities. In some instances, the stockholders of a company are in a position to suggest desirable employees, but on the whole this cannot be viewed as a fruitful source.

The Conference Method of Controlling Recruitment.—As a means of testing the activities of the employment department in matters pertaining to recruitment, a number of large concerns have adopted the conference plan. This consists of a weekly meeting of department heads and other supervisors who meet with the superintendent or employment manager. There is an exchange of ideas with regard to the kinds of workers who are proving satisfactory and frank criticism of the recruiting work when undesirable types are brought into the service of the company. Production, attendance, and other records of new employees are brought to the meeting as a factual basis for criticism and complaint. Ways and means of improving the work of recruitment are devised, and suggestions about desirable sources are offered. Such a conference is most urgent in large retail establishments or plants where the flow of labor is great, and in emergency periods when recruitment tends to become less thorough. Even in smaller companies and in normal times, weekly conferences on production and employment relations are valuable. If the principal sources of labor supply tapped by the employment office are yielding mediocre candidates for good positions, then steps must be taken to develop more adequate sources. In the last analysis, the executives can best judge the adequacy of the workers who come to them.

CHAPTER X

SELECTING THE WORKER

Careful Selection Indispensable to Efficiency.—The early experiments of Frederick W. Taylor clearly demonstrated what scientific selection and placement mean, both to the worker and to his employer. Out of the hundreds of men that were employed in the Bethlehem Steel Company yards at the time the experiment was performed, only one in ten was found to be physically and mentally fit to lift heavy pigs of iron from the scrap heap and load them onto a freight car all day long. From among those found fit, a 128-pound Dutchman was the best worker of them all, simply because his mental and physical capabilities were of such nature that, when he had been properly introduced into his new working environment, coached and instructed, he was able to perform his simple tasks with a high degree of efficiency.

Through these and other early demonstrations, the industrial world has learned the valuable lesson of scientific selection and placement of men. Selection includes interviewing and choosing the worker whose physical and mental possessions make him best qualified to fit into the organization. Placement is the task of fitting the worker into a job. The general functions of selection and placement comprise the intelligent choice of new workpeople from among those whom recruiting agencies have brought to the plant, the correction of misplaced workers through the operation of an effective system of transfers, and a careful analysis of the training, experience, interests, and records of employees for purposes of promotion. In many organizations, the functions of the so-called "personnel department" are confined to those activities which are incident to the recruitment, choice, and assignment of employees. These, however, are only a part of the important responsibilities of a well organized department.

The effectiveness of any personnel program must rest ultimately upon the successful selection of the employees and the proper direction of their energies into efficient activities. Sources of labor may be adequate and methods of recruitment may be effective, but these will not suffice to assure loyalty and stability of the working force and general efficiency unless those recruited are carefully scrutinized, well chosen, and properly placed. Recruitment and selection are mutually dependent. Proper recruitment will furnish good material for selection; scientific selection will discover the best of that material; and scientific placement will use it to the greatest advantage.

Value of Proper Selection.—An experienced employer of labor once remarked, "If I could find any way of choosing and hiring employees who are one-half as good, relatively, as the machines I buy, my success would be enormous. The most effective machinery, excepting that exclusively controlled by patent, is available alike to all manufacturers. The main factor of difference between the successful and the unsuccessful plant is the human element by which machinery is operated." Proper selection not only enhances the potential efficiency of the organization but directly eliminates much of the economic waste involved in antiquated methods of choosing employees. Estimates indicate that it costs anywhere from $25 to $200 to hire and train a new worker for his job, and, in operations where valuable material can be easily spoiled by inexperienced workpeople, the expense is even greater. Obviously, the cost varies with the degree of skill required and the complexity and delicacy of the operation or task.

An executive of one of the world's largest machine manufacturing companies once estimated that it cost his company over $2,000 every time a certain kind of new employee was added to the company's payroll. If, before the end of a 2-year intensive training program, either the management or employee discovers that a mistake has been made in selection, a goodly amount of the company's money has been dissipated. The vice-president of a life insurance company recently stated that he was spending a year in traveling over the entire United States in an effort to select only ten or twelve young men who, after several years of intensive life insurance training at guaranteed salaries ranging upward from $125 per month, might make good with the company. A young university-trained man working in the personnel office of a large aircraft company by chance ran across eight different "close-out slips" terminating the record of eight employees. He noticed these slips all came from the same department and all were signed by the foreman with the same reason for discharge, to wit, "failure to show progress." These men were hired just 2 weeks previously, but the company was probably losing much more than the 2 weeks' pay for these eight men largely because some one failed to make proper selection or proper placement of these new workers. If the introduction of scientific methods of selection and of placement will enable a concern to reduce its labor turnover so as to avoid the necessity of employing a thousand new workers during a year, then many thousands of dollars will have been added to its profit account or will be available for higher wages.

The value of an acceptable system of selection and placement is not confined to the choosing of desirable employees and reducing labor turnover but extends to the weeding out of misfits and overpaid individuals in the organization. For example, by the application of a series of tests, a corporation discovered that certain of its $2,500-a-year employees showed no greater ability than many of its $1,000-a-year clerks. Tested by various standards, its higher paid individuals were in many cases less capable than lower paid ones. Poor selection, misplacement, and the absence of a systematic follow-up had cost the company a considerable sum.

Specifically, the value of proper selection and placement is found in at least six factors: the reduction of labor turnover, with its consequent wastes; the general increase in the efficiency of organization; the saving which results from paying employees according to their ability and avoiding payment for incompetence; the prompt readjustment of misplaced employees, which enables them to yield larger returns on their cost; the economies resulting from the reduction of special training courses for excessive numbers of new workers; and the intangible advantages that invariably accrue from a working force which is contented because it is well placed.

The progress of a company is conditioned by the development and advancement of its workers. The vital points at which the effectiveness of the working force is originally determined are selection and placement. When enlightened labor administration within the plant is added to these, efficiency invariably results. For this reason, an increasing interest among employers in the problem of improving the quality of operatives through scientific methods of recruitment, selection, placement, and follow-up has been witnessed during recent years. Such methods have value not only in the case of ordinary employees but also among major and minor executives.

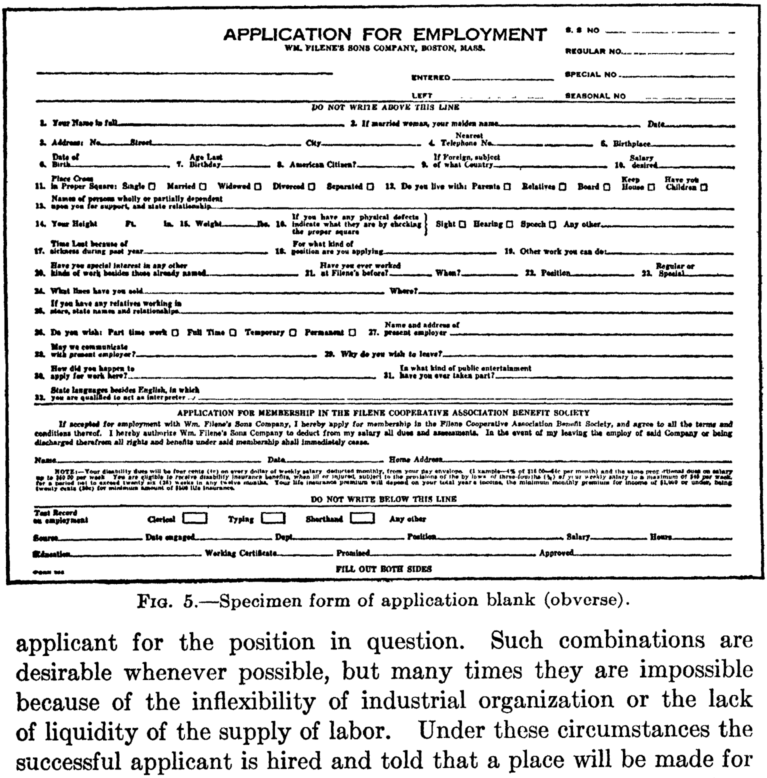
The Basis of Successful Selection and Placement.—Men and women cannot be selected and placed successfully unless those who do the interviewing of applicants know the nature and requirements of the positions to be filled. Job analysis and job specification must precede proper selection and placement. The more complete the details available concerning specific jobs, the more nearly correct will be the selection and assignment of workers. In the proper adjustment of personnel to its duties and responsibilities, the specific requirements of the job are as important as the qualifications of the man. Job analysis and job specification, which were discussed in another chapter, indicate the necessary requirements of the work; the application blank, interviews, service records, and other personnel instruments furnish necessary data relative to the qualifications of the worker.

Generally speaking, job specification sets forth a careful description of the work, the job that leads to it, and the job to which it leads, responsibilities, permanence, pay, hours, overtime, the kind of worker required, the nature of the operations, tools, postures, speed, disagreeable features, objections to it, the common sources of supply. The application blank, which is considered in detail later in this chapter, furnishes information concerning such qualifications as age, education, race, religion, citizenship, residence, knowledge, and ability in relation to the job under consideration, general intelligence, special abilities, prospect of stability, temperament, sociability, appearance, personality, character, physical fitness, home surroundings and influences, ambition, and wage or salary desired.

Methods of General Selection.—In view of present-day practice, the selection and placement of workers must be considered as two independent functions of the personnel department. There are several important reasons for this. Most important is the fact that much of American industrial organization (that part which necessitates the maintenance of a personnel department) is so large and complicated that much of the labor supply is secured en masse; workers are chosen because of their general qualifications and fitness, and only after they are on the payroll are they placed in their individual positions. That this fact is of considerable importance is indicated by the necessity for careful follow up, adjustment, and transfer of those who at first are not directed into occupations which they can fill efficiently.

General selection is the first and primary step in building up the labor force. This function is not complete, however, until each worker has been placed in a position which he is capable of filling. Because of changes in physical and mental abilities, interest, and environmental influences, the tasks of selection and placement are permanent ones.

The dual functions of selection and placement do not preclude the possibility of selecting and placing an applicant for a specific position all in one operation. When this is the case the applicant is chosen because his general qualifications are such as to make him valuable to the organization; he is specifically assigned to a particular task because of the particular or definite fitness of the applicant for the position in question. Such combinations are desirable whenever possible, but many times they are impossible because of the inflexibility of industrial organization or the lack of liquidity of the supply of labor. Under these circumstances the successful applicant is hired and told that a place will be made for him until the desired position opens up, or until his proper place in the company can be determined.



APPLICATION FOR EMPLOYMENT
WM. FILENE'S SONS COMPANY, BOSTON, MASS.

S. S NO
REGULAR NO.
ENTERED
SPECIAL NO
LEFT
SEASONAL NO

DO NOT WRITE ABOVE THIS LINE

1. Your Name in full 2. If married woman, your maiden name Date
3. Address: No. Street City 4. Nearest Telephone No. 5. Birthplace
6. Date of Birth 7. Age Last Birthday 8. American Citizen? 9. If Foreign, subject of what Country 10. Salary desired
11. Place Cross in Proper Square: Single ☐ Married ☐ Widowed ☐ Divorced ☐ Separated ☐ 12. Do you live with: Parents ☐ Relatives ☐ Board ☐ Keep House ☐ Have you Children ☐
13. Names of persons wholly or partially dependent upon you for support, and state relationship
14. Your Height Ft. In. 15. Weight lbs. 16. If you have any physical defects indicate what they are by checking the proper square } Sight ☐ Hearing ☐ Speech ☐ Any other
17. Time Lost because of sickness during past year 18. For what kind of position are you applying 19. Other work you can do:
20. *Have you special interest in any other* kinds of work besides those already named 21. *Have you ever worked* at Filene's before? When? 22. Position 23. Regular or Special
24. What lines have you sold Where?
25. If you have any relatives working in store, state names and relationships
26. Do you wish: Part time work ☐ Full Time ☐ Temporary ☐ Permanent ☐ 27. Name and address of present employer
28. May we communicate *with present employer?* 29. *Why do you wish to leave?*
30. How did you happen to apply for work here? 31. In what kind of public entertainment have you ever taken part?
32. *State languages besides English, in which* you are qualified to act as interpreter

APPLICATION FOR MEMBERSHIP IN THE FILENE COOPERATIVE ASSOCIATION BENEFIT SOCIETY

If accepted for employment with *Wm. Filene's Sons Company*, I hereby apply *for membership* in the Filene Cooperative Association Benefit Society, *and agree to all the terms and* conditions thereof. I hereby authorize Wm. Filene's Sons Company to deduct from my salary all dues and assessments. In the event of my leaving the employ of said Company or being *discharged therefrom all rights and benefits under said membership shall immediately cease.*

Name Date *Home Address*

NOTE:—Your disability dues will be four cents (4c) on every dollar of weekly salary deducted monthly, from your pay envelope. (Example—4% of $16.00—64c per month) and the same proportional dues on salary up to $40.00 per week. You are eligible to receive disability insurance benefits, when ill or injured, subject to the provisions of the by laws of three-fourths (¾) of your weekly salary to a maximum of $40 per week, for a period not to exceed twenty six (26) weeks in any twelve months. Your life insurance premium will depend on your total year's income, the minimum monthly premium for income of $1,000 or under, being twenty cents (20c) for minimum amount of $500 life insurance.

DO NOT WRITE BELOW THIS LINE

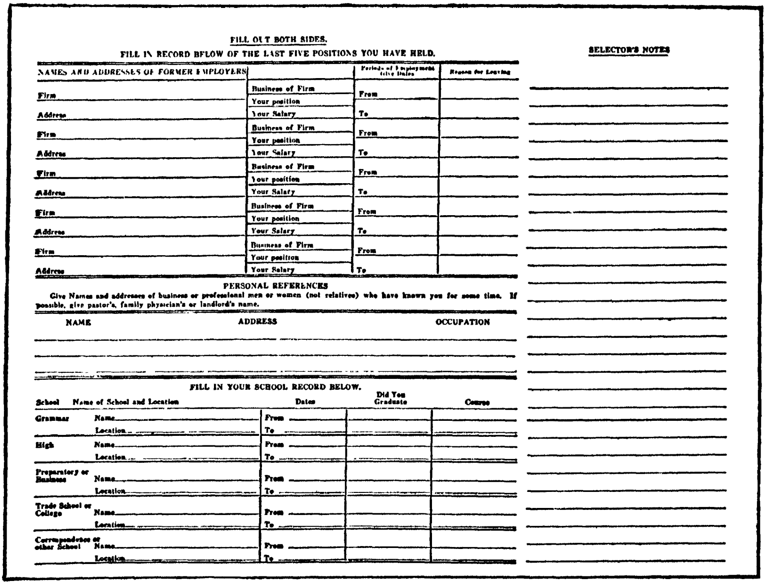
Test Record on employment Clerical ☐ Typing ☐ Shorthand ☐ Any other
Source Date engaged Dept. Position Salary Hours
Education Working Certificate Promised Approved

FILL OUT BOTH SIDES

FIG. 5.—Specimen form of application blank (obverse).

It is important to remember the difference of functions because they involve separate and distinct methods of technique. This chapter and the one following discuss the methods of general selection, that is, selection by application, interview, general intelligence tests, and physical examination. In Chap. XII, we shall deal with the principles of proper placement, which involve various measurements and analyses designed to find the particular tasks or duties which the newly selected employee is best equipped to perform.

1. *Selection by Application.*—In order to simplify the procedure in the selection of new employees, most employers have devised a questionnaire usually referred to as the "Application Blank." Items appearing on these blanks call for information needed to determine whether the person applying for work possesses proper background, experience, training, character, and physical fitness to qualify for employment in general, or for a specific position. While these forms vary according to the type of business and occupation, most of them include the following items:[1]



FILL OUT BOTH SIDES.

FILL IN RECORD BELOW OF THE LAST FIVE POSITIONS YOU HAVE HELD.

SELECTOR'S NOTES

NAMES AND ADDRESSES OF FORMER EMPLOYERS		Periods of Employment Give Dates	Reason for Leaving
Firm	Business of Firm	From	
	Your position		
Address	Your Salary	To	
Firm	Business of Firm	From	
	Your position		
Address	Your Salary	To	
Firm	Business of Firm	From	
	Your position		
Address	Your Salary	To	
Firm	Business of Firm	From	
	Your position		
Address	Your Salary	To	
Firm	Business of Firm	From	
	Your position		
Address	Your Salary	To	

PERSONAL REFERENCES

Give Names and addresses of business or professional men or women (not relatives) who have known you for some time. If possible, give pastor's, family physician's or landlord's name.

NAME	ADDRESS	OCCUPATION

FILL IN YOUR SCHOOL RECORD BELOW.

School	Name of School and Location	Dates	Did You Graduate	Course
Grammar	Name	From		
	Location	To		
High	Name	From		
	Location	To		
Preparatory or Business	Name	From		
	Location	To		
Trade School or College	Name	From		
	Location	To		
Correspondence or other School	Name	From		
	Location	To		

FIG. 6.—Specimen form of application blank (reverse).

Name of company.
Date of application.
Applicant's name, address, and phone number.
Date and place of birth.
Nationality, citizenship, and residence period.
Marital status and dependents.
Physical traits (height, weight, etc.).
Position desired.
Educational training.
Name of school attended.
Years attended. Graduate?
Foreign languages (written or spoken).
Business experience.
Name and address of previous employers.
Nature of work.
Dates employed.
Personal references.
Outside or particular interests.
Signature of employee.

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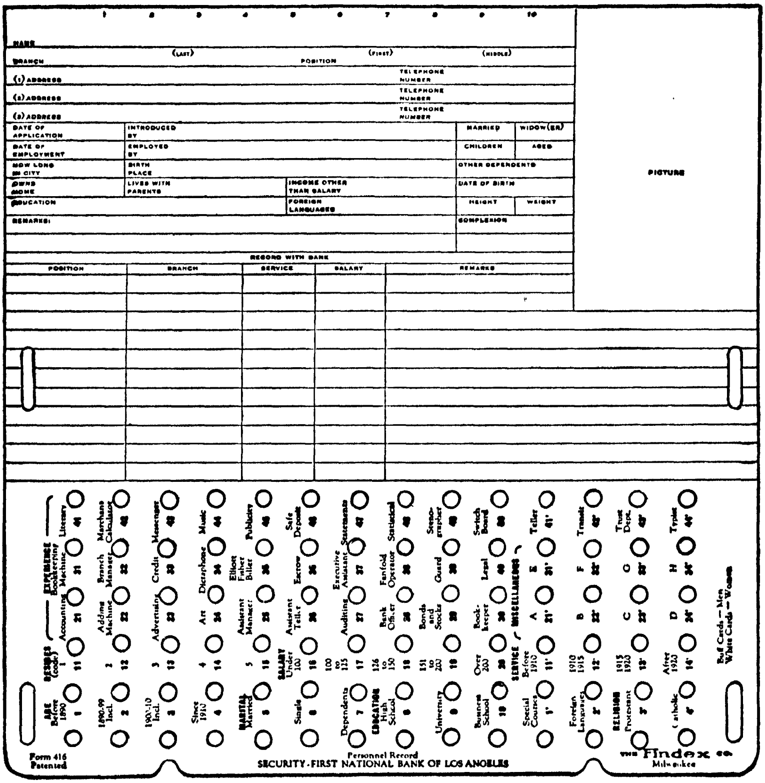
[1] For a helpful memorandum on employment applications, see one prepared by the Metropolitan Life Insurance Company in 1934.

When the application blank covers employment which calls for aptitude or other tests in the completion of selection, the form will provide such space as may be necessary to record results. The Filene Department Store form, reproduced above, carries these and several additional items. In some cases, rating and impression spaces are provided upon the form, to be filled in by the interviewer (see Fig. 6). Some forms are designed so that applicants are rated according to a standard scale in order to assure proper appraisal, while some companies keep personal comments or ratings on entirely separate forms.

Of primary importance in the matter of the application blank is the question of whether the applicant shall fill out his own application blank or whether this shall be done by the interviewer. There are good reasons for having the applicant do it. This practice furnishes the employment office with a type of testing device showing the applicant's ability to follow instructions carefully and completely. If a record is kept of the time taken to fill out the application blank the result serves as a rough measure of the speed of perception. When a considerable number are waiting to be interviewed, the monotony of waiting is broken by utilization of time that would otherwise rest heavily upon the applicant's hands. In any event, the applicants should be permitted to study carefully the various questions in order that answers may be as complete and intelligent as possible, and friendly counsel should be offered them where interpretation of specific questions is in doubt.

The actual methods of using this form vary considerably. In some cases the applications are accepted by an office clerk without interview, to be placed on file until a need for workers arises. Again, some employers have the applicants fill in the blank prior to the interview. In other cases, the interviewer fills in the form at the time of interview. Still other companies prefer to hold a preliminary personal interview first; if the applicant is thought to have possible qualifications he is asked to fill in the blank. Where there is no immediate vacancy, the company either files the form for future reference, or, as is the case with most of the larger companies, the information is transferred onto coded Findex application or personnel record cards, which are perforated to make it possible to determine almost immediately the applicants or employees possessing the necessary combination of qualifications. Figure 7 shows a form of this card used by a large metropolitan bank. Some companies maintaining small numbers of applications file by alphabetical order of applicants; others file by type of position best suited. The Findex card makes possible the immediate cross classification of several thousand of the application cards simultaneously and thus is well suited to organizations maintaining large files. Where the application cards are filed for future reference it is important that the period of maintaining old records be limited, since persons filing applications may soon find other employment. General employment and labor conditions existing in the communities where application has been made will influence the length of this period.



1 2 3 4 5 6 7 8 9 10

NAME (LAST) (FIRST) (MIDDLE)

BRANCH POSITION

(1) ADDRESS TELEPHONE NUMBER

(2) ADDRESS TELEPHONE NUMBER

(3) ADDRESS TELEPHONE NUMBER

DATE OF APPLICATION	INTRODUCED BY		MARRIED	WIDOW(ER)
DATE OF EMPLOYMENT	EMPLOYED BY		CHILDREN	AGES
HOW LONG IN CITY	BIRTH PLACE		OTHER DEPENDENTS	
OWNS HOME	LIVES WITH PARENTS	INCOME OTHER THAN SALARY	DATE OF BIRTH	
EDUCATION		FOREIGN LANGUAGES	HEIGHT	WEIGHT
REMARKS:			COMPLEXION	

PICTURE

RECORD WITH BANK

POSITION	BRANCH	SERVICE	SALARY	REMARKS

AGE Before 1890 1 — 1890-99 Incl. 2 — 1900-10 Incl. 3 — Since 1910 4

MARITAL Married 5 — Single 6 — Dependents 7

EDUCATION High School 8 — University 9 — Business School 10 — Special Courses 1' — Foreign Languages 2'

RELIGION Protestant 3' — Catholic 4'

RESERVES (code) 1 11 — 2 12 — 3 13 — 4 14 — 5 15

SALARY Under 100 16 — 100 to 125 17 — 126 to 150 18 — 151 to 200 19 — Over 200 20

SERVICE Before 1910 11' — 1910 1915 12' — 1915 1923 13' — After 1923 14'

EXPERIENCE Accounting 21 — Bookkeeping Machine 31 — Literary 41 — Adding Machine 22 — Branch Manager 32 — Marchant Calculator 42 — Advertising 23 — Credit 33 — Messenger 43 — Art 24 — Dictaphone 34 — Music 44 — Assistant Manager 25 — Elliott Fisher Biller 35 — Publicity 45 — Assistant Teller 26 — Escrow 36 — Safe Deposit 46 — Auditing 27 — Executive Assistant 37 — Statements 47 — Bank Officer 28 — Fanfold Operator 38 — Statistical 48 — Bonds and Stocks 29 — Guard 39 — Stenographer 49 — Bookkeeper 30 — Legal 40 — Switch Board 50

MISCELLANEOUS A 21' — E 31' — Teller 41' — B 22' — F 32' — Transit 42' — C 23' — G 33' — Trust Dept. 43' — D 24' — H 34' — Typist 44'

Buff Cards — Men
White Cards — Women

Form 416
Patented

Personnel Record
SECURITY-FIRST NATIONAL BANK OF LOS ANGELES

THE Findex CO.
Milwaukee

FIG. 7.—Personnel record card.

Considerable time and expense would be involved in having every applicant who comes to the office fill out a complete personnel record or application blank. Yet, if a waiting list is to have real value, it is necessary to have general information about those applicants who appear desirable. To meet this need some employ-

Name Age

Occupation Date

DESCRIPTION

Color Size

Appearance—Health Clothes

Expression

Physical characteristics

Remarks

(Obverse)

BUSINESS PERSONALITY

Unusual Impressive Favorable Unimpressive

EDUCATION

Extensive Highly satisfactory Satisfactory Passable

EXPERIENCE

Expert Extensive Meets requirements Incomplete Beginner

ADAPTABILITY

Highly adaptable Adaptable Fairly adaptable Doubtful

FUTURE VALUE

Very high High Medium Low

(Reverse)

Fig. 8.—Preliminary description and rating sheet.

ment executives have devised the preliminary data and rating slip which makes possible a tentative rating of applicants. Such items as name, age, present occupation, and general personal and physical characteristics are noted; there is also a preliminary check on such qualities as business personality, education, experience, adaptability, and future value to the firm. The sample shown in Fig. 8 indicates more completely the nature of this instrument. If the waiting list is to have practical value, it should be kept "alive," that is, the names of applicants who are called in but who do not respond should be removed from the files.

2. *The Oral Interview.*—No phase of personnel procedure can be reduced to a basis of mechanical and mathematical precision. Instruments and records must always be supplemented by personal conferences and human contacts. In the absence of intimate conference, personnel administration ceases to be personal and becomes impersonal and mechanistic. In obtaining necessary information regarding applicants for positions, the interview is an indispensable agency. Only in an extreme labor shortage or upon the unqualified recommendation of a personal friend whose judgment has proved reliable, should an employee be hired without some kind of an interview.

Interviewing is a difficult art involving the fine elements of diplomacy. It is no job for the immature and inexperienced. In the successful interview, every effort is made to have the applicant discuss freely his specific qualifications, reveal his general characteristics, and state his major hopes and ambitions, likes and dislikes. The skillful interview conduces to complete self-analysis, albeit an unconscious analysis. When properly conducted, the interview indirectly makes the applicant see his own limitations and incapacities in relation to the position under consideration, without being made to suffer the embarrassment which results from the discourteous interview. Frankness, honesty, and truthfulness are always encouraged by the carefully planned and skillfully conducted interview.

Honesty, frankness, and truthfulness are equally a responsibility of the interviewer. Every essential detail of the position must be presented, including the degree of education, skill, training, and experience required; the conditions of employment, whether dangerous or relatively safe, dirty or clean, wet or dry; the hours of employment and possible overtime periods, Sunday labor, and nightwork; the wage rate, payroll taxes to be deducted, possible advances, methods, and time of payment; and promotional opportunities. It cannot be too strongly emphasized that cumulative discontent, general ill will, and subtle forms of inefficiency develop from the vicious habit, so prevalent in American industry, of overselling the position. To avoid this danger, some firms supplement the interview of desirable applicants with an actual examination of the position and all evidence relating to it.

Successful interviewing, then, is founded upon adherence to certain well-defined principles of conduct. The applicant must first be put at ease as completely as possible. An individual seeking a job is often nervous and timid, and embarrassed by the strange surroundings of the employment office. He is usually very self-conscious when trying to sell his services and to make a good impression. Under these circumstances he welcomes some word or attitude from the interviewer that will relieve the tension.

The interview is inseparably linked up with the personality and ability of the interviewer. Pleasant and attractive men and women assigned to the important position of interviewing succeed by displaying approachableness, turning fear into confidence, and making normal reactions possible. To an attractive personality must be added a good memory that will retain details and avoid the necessity of writing down data in the presence of the applicant; tactfulness and a sense of humor; faith in the enterprise; and ability to present the case for the job and the company in a persuasive manner with due regard for the truth. A sincere interest in humanity is a primary requisite of the expert interviewer. This interest enables him to understand the applicant's point of view and to keep in mind that the decision and choice will affect for good or ill a human career and determine in part the success of the company.

The successful interview is so planned and conducted as to get the greatest amount of necessary information without resorting to rapid-fire methods. This means that the questions should not be stilted and stereotyped, but skillfully framed to obtain the required data indirectly; and that the method of asking them should not be dull and commonplace.

a. PRELIMINARY INTERVIEW.—Many firms now have a preliminary and a final interview. In some establishments, the preliminary interviewer examines the items on the application blank and questions the applicant briefly. Inasmuch as the filling out of the blank takes time and involves expense, many companies provide for the preliminary interview before the application blank is given to the prospective employee. If the preliminary interview results favorably, the applicant is requested to fill out the blank, is given the mental and trade tests adopted by the employment office or the educational department, and is scheduled for a physical examination. The nature and method of the preliminary interview vary with the company.

The initial reception of an applicant is important. At this time first impressions of the prospective employer are formed, and first impressions are lasting. At this time also the company's first impressions of the applicant are formed. It is in the preliminary interview that the weeding-out process is rigidly begun, and when effectively carried out results in the saving of time otherwise spent in useless questioning. Caution is exercised by progressive concerns lest the weeding out be conducted too hastily and good workers be lost to the company. Snap judgments are to be avoided. The tone and attitude of the preliminary interviewer are invariably construed as characteristic of the whole organization. Just as customers judge the policy of a store by the manner of its salespeople, so applicants judge a firm's labor policies by the behavior of the interviewer. Obviously, a skillful person should be assigned to this important function, but there are many instances where the weakest member of the employment staff is given this responsibility. Desirable applicants will not be favorably impressed if a clerk indifferently hands out an application blank with the instruction to fill it out and hand it back. In the general procedure, it must always be remembered that almost every applicant calls for a slightly different method of approach, and that the principal function of any interview is not merely to pick a man but to select the right man for the right place.

In the interviewing process, jobs are sold and services are bought; it is essentially a sale and purchase procedure. The memory of a pleasant and courteous reception remains with the applicant even though it becomes necessary to reject him, and if he enters the service of the company it is with a better spirit than when the reverse type of reception is accorded him. The physical features and equipment of the employment office, like the attitude of the interviewers, reflect the general atmosphere of the company and aid in determining the applicant's impression. It should, therefore, be clean, comfortable, and congenial. To the credit of a very large number of American concerns, it must be said that this is precisely the situation in numerous employment offices.

In the large employment offices, waiting is inevitable, and it is necessary to relieve the monotony and strain incident to it. Effort should be made to provide adequate seating capacity to eliminate the necessity of standing. Many companies provide a good assortment of reading matter, including newspapers, magazines, and literature concerning the company and its policies. An employment office well situated and neatly appointed makes waiting less tiresome, but the physical equipment must not be overdone and entirely out of harmony with the rest of the plant's physical outlay. A definite attempt should be made to determine the exact need of the company and thus avoid the irritating practice of making an applicant wait for several hours, only to be told in the end, "We have nothing for you." Skillful and prompt weeding out will obviate this difficulty.

b. FINAL INTERVIEW.—All final interviews should be held privately. An applicant dislikes to answer questions about himself and his personal affairs in the presence of strangers. The private office should not be a hidden chamber but have a transparent glass partition so that those who are waiting their turn may have an idea of what is taking place inside. When they can see the interviewer and applicant in friendly conference, the ordeal does not "look so bad." Many companies have adopted this type of interview room.

It is desirable that male and female applicants be segregated as soon as possible after entering the employment office, since women are often sensitive to association with strangers. Recognition of this fact has led many companies to provide separate entrances and separate offices for men and women applicants. It has also been found a wise policy to have men interview men, and women interview women. Experience indicates that women are inclined to converse more freely with a woman, a fact that insures a more accurate revelation of their qualifications than an interview by a man. Likewise, men are reluctant to give necessary information when interviewed by a woman.

3. *Selection by Reference.*—A time-honored method of selecting employees is the general or special letter of reference. Although letters of recommendation are still widely used in choosing men and women in the professions, there is a growing distrust of them in industry and commerce. In the professions, professional standing still insures honesty and sound judgment (in so far as human judgment can be sound), but even here cross checks should be developed. In business, however, conditions are different. There is a conspicuous absence of responsibility for the laudatory statements contained in the general letter of recommendation. This fact is well demon-

strated by the experience of one large public utility company which received only twenty letters containing adverse references or comment in response to several thousand letters of inquiry sent out.[1] The inaccuracy and unreliability of such sources of information are attributable to certain conditions. First, the applicant naturally lists as references the names of those persons who will be likely to give him favorable endorsement, often a close relative or personal friend. Then too, human sympathy and prejudice color subjective appraisals of people, as is seen by individual rating of the same applicant given in the following section. The person who writes the letter of recommendation is usually unwilling to prevent the employment of the individual—he is seldom wholly honest in his estimate. Fair and accurate judgment is also precluded in some cases because of personal prejudice, jealousy, and antagonism. Finally, those who give recommendations usually have little at stake in the success of the worker, and often know the applicant only in a general way and are in no sense sufficiently conversant with his occupational or professional ability to warrant a complete and reliable judgment of his qualifications for a particular position. Letters are often written as a matter of courtesy for a friend or an acquaintance.

Of far greater value as a source of information about a prospective employee is the judgment of a former employer. This is especially true if the company has a well-organized personnel department which has the service record of the individual as a basis of rating. When obtained in response to a specific inquiry, this type of reference has considerable value. A form letter facilitates an answer because the special items listed merely need to be checked. No letter of reference, however, can be relied upon as the sole basis for selection or placement.

That this instrument should be used as a supplement to the filing of application and interview is shown in the experience of a manufacturing company employing several thousand skilled and semiskilled machinists. In its effort to build the payroll by adding new employees, the personnel department made placements after holding personal interviews and accepting applications. According to these standards of selection, those accepted were quite satisfactory workers, entitled to a certain starting rate of pay. In the course of two weeks after hiring, however, returns from letters of inquiry sent out to those listed on the form by a number of applicants at the time of application showed the references to be false and the new employees were discharged, but at considerable loss to the company. Even this loss, however, was not so great as might have been the case if reference letters had been omitted altogether.

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[1] WADSWORTH, GUY, JR., "How to Pick the Men You Want," *Personnel Journal*, vol. 15, March, 1936, p. 335.

As a precaution against suits for libel, employers in increasing numbers are adopting the "release slip," which is a written statement specifically exempting the employer from legal prosecution for any information contained in the letter of recommendation. Each employee who leaves the service of the company and who directly or indirectly requests a letter of recommendation is required to sign this release before the letter is forwarded to the prospective employer. Adverse decisions in damage suits have been responsible for this precautionary action.

4. *Selection by Group Rating and Character Analysis.*—In certain types of work, particularly such lines as engineering, selling, investigation, and the like, applicants are often selected either partially or wholly upon a basis of ratings made during personal conferences before placement officers. When one interviewer is responsible, the selection is usually based upon an acceptable rating form, similar to Fig. 8. Character, personality, and ability analyses of this sort are openly subject to all the weaknesses of human prejudice and judgment, and thus lie well within the field of moral traits and behavior. These analyses seek to pass judgment on such qualities as will power, integrity, loyalty, and individual standards. However, ratings do present an opportunity to investigate weak characteristics and offer a basis of comparing standards of judgment of those doing the rating. If given repeatedly by the same person, they provide a periodic evaluation of the worker.

The obvious weaknesses of selection through single rating are somewhat overcome by the group-rating system of selection. Under this method, ratings by individual interviewers are given for the applicant either where the interview has brought him before all of the interviewers sitting together as a board, or where interviews are held separately and the individual ratings are secretly tallied.

There are advantages and weaknesses to both these types of group interview. One of the best illustrations of rating by means of the interview board will be found in the selection and placement procedure used by many civil service commissions. In California, for instance, every applicant for a state civil service position submits first to a written examination. These tests are designed to cover a rather wide range of subject matter that will give a fair index to the applicant's innate intelligence, knowledge, and experience. If the test is successfully passed, he is given an appointment to appear before the State Oral Interview Board, a body of from three to five men whose judgment and integrity are relied upon by the commission. Each applicant appears before the board for 15 to 30 minutes or more, during which time questions are asked and the traits of the applicant are carefully observed and responses analyzed. In this way, the successful applicant, before gaining final civil service appointment, appears personally before several interviewers. Advantages of this personal contact are obvious. The applicant's character, personality, appearance, mannerisms, reaction, mental alertness, and speech can be carefully reviewed. When the interview is completed, each member of the board makes his rating of the applicant. If desirable, a further reference on the applicant can be sought. These ratings are tallied, and the final placement under civil service depends upon a combination of the final oral ratings and the written civil service examination grade.

The chief weakness of this scheme is the tendency for one member of the board to be influenced in his rating by the apparent reaction of other members of the board. The individual ratings are not always secret. Then, too, in making ratings the values assigned seldom express the rater's true views. Given qualities and actions are assigned rigid weights and various combinations of numerical scores may give the same total rating.[1]

But there can be no doubt that the combined judgment of three or five persons is ordinarily sounder than that of one individual. Prejudice, partiality, and politics thus tend to be removed from selection. Herein lies the chief virtue in this method of selection and in the merit system.

The second variety of group interview involves the pooling of individual ratings made by different interviewers at different times. In principle, this method should be sound, for it also attempts to gain combined human judgment upon the theory that the impression made by a certain applicant upon several different individuals is a better basis for a selection rating than one developed from impressions made upon a single interviewer.

But curious results have been gained from this kind of procedure. Two simple recordings will be sufficient to illustrate the limitations of group ratings. One relates to the scores given by twelve different interviewers from leading companies who volunteered to interview and rate each of fifty-seven applicants for a sales position with a nationally advertised firm.

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[1] See WADSWORTH, GUY, JR., "Practical Employee Ratings," *Personnel Journal*, vol. 14, February, 1935, p. 213.

Table 1 presents the ranks assigned the first ten of the fifty-seven applicants by each of the twelve chosen interviewers.[1] In analyzing these results, it is important to remember that these interviewers were not average, rank-and-file, inexperienced men. On the contrary, they were exceptional and experienced sales managers, personnel officers, and qualified interviewers of large concerns. They were rating the applicants for suitable qualifications in the line of work in which they themselves excelled. In view of these facts, nothing short of the fallibility of human judgment can account for the differences in ratings given applicant *C* by two interviewers. One (No. 9) assigned the applicant the lowest rating among the fifty-seven applying; the other (No. 11) assigned the same applicant first place among the entire group.

TABLE 1.—RANKS ASSIGNED TEN OF FIFTY-SEVEN APPLICANTS BY TWELVE INTERVIEWERS

Applicant	Interviewers Assigning Ranks											
	1	2	3	4	5	6	7	8	9	10	11	12
	Ranking (Highest possible score = 1; lowest possible score = 57)											
A	33	46	6	56	26	32	12	38	23	22	22	9
B	36	50	43	17	51	47	38	20	38	55	39	9
C	53	10	6	21	16	9	20	2	57	28	1	26
D	44	25	13	48	7	8	43	11	17	12	20	9
E	54	41	33	19	28	48	8	10	56	8	19	26
F	18	13	13	8	11	15	15	31	32	18	25	9
G	33	2	13	16	28	46	19	32	55	4	16	9
H	13	40	6	24	51	49	10	52	54	29	21	53
I	2	36	6	23	11	7	23	17	6	5	6	9
J	43	11	13	11	37	40	36	46	25	15	29	1

Fortunately, not all group ratings for selection purposes are as futile as these data seem to indicate. Many personnel departments send out to the various departments what is called a "Thirty-day Review" card, asking for ratings on employees hired only a month previously, for follow-up and promotional purposes. Figure 9 presents the rating card used by a large retail sales organization, and

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[1] HOLLINGWORTH, HARRY L., *Vocational Psychology and Character Analysis*, p. 116.

Thirty-day Review

M________________________, Dept.__________ __________193_
____________________ S______ ________________ was employed
Name Store No. Occupation

For your department on________________at a weekly wage of $________

You are requested to report on employe as indicated on reverse of this card, returning it to the employment office without delay.

RATING

(Check in proper columns)

	Good	Average	Poor
Personality			
Willingness to obey orders promptly			
Appearance			
Quality of work			
Quantity of work			

Do you consider employe to be promotional probability? Yes ☐
No ☐

Signature________________

Fig. 9.

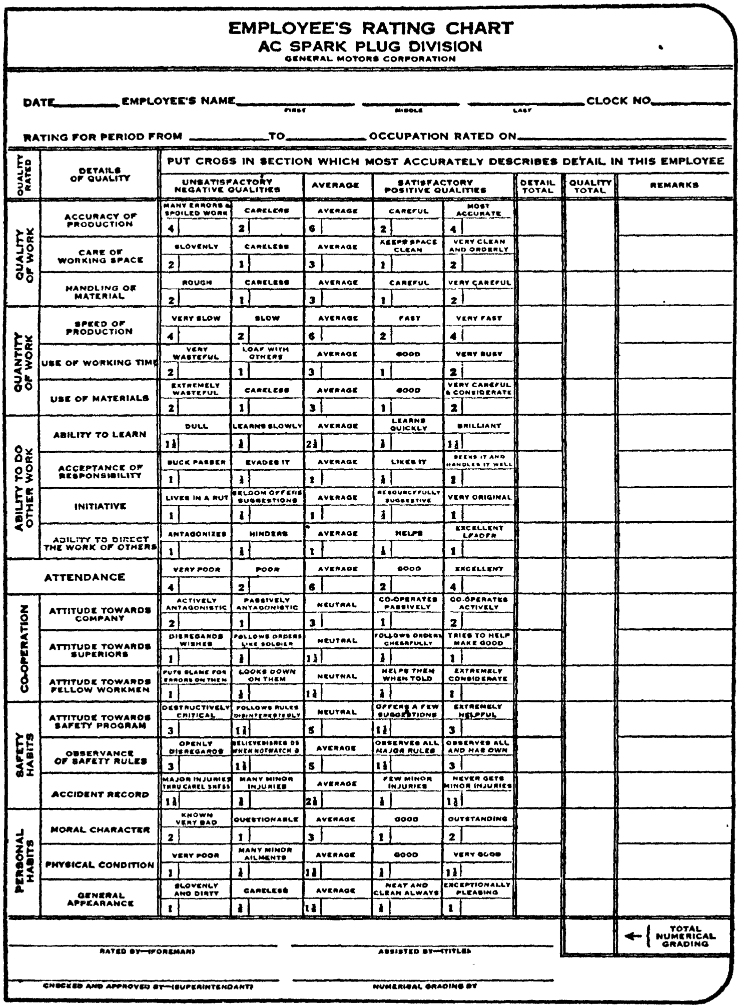
Fig. 10 presents a periodic rating form used by a large industrial company to rate all hourly employees. The results of such a rating given to a group of forty-eight carpenters and painters by

Table 2.—Final Letter Ratings of Group of Carpenters and Painters by Two Foremen[1]

Agreements and disagreements	Number of cases	Percentage of cases
Perfect agreement	25	52
Disagreement of one-letter step	21	44
Disagreement of two-letter step	2	4
Disagreement of three-letter step	0	0
Disagreement of four-letter step	0	0
Total	48	100

[1] *Ibid.*, p. 197.

two foremen of a company are set forth in Table 2. Inspection of these results shows that perfect agreement was reached in half the cases, and fair agreement was reached in all but two of the cases. Several generalizations have been drawn from a study of agreements and disagreements between foremen:[1]



EMPLOYEE'S RATING CHART
AC SPARK PLUG DIVISION
GENERAL MOTORS CORPORATION

DATE______ EMPLOYEE'S NAME______ (FIRST) ______ (MIDDLE) ______ (LAST) CLOCK NO.______

RATING FOR PERIOD FROM ______ TO______ OCCUPATION RATED ON______

QUALITY RATED	DETAILS OF QUALITY	PUT CROSS IN SECTION WHICH MOST ACCURATELY DESCRIBES DETAIL IN THIS EMPLOYEE							
		UNSATISFACTORY NEGATIVE QUALITIES		AVERAGE	SATISFACTORY POSITIVE QUALITIES		DETAIL TOTAL	QUALITY TOTAL	REMARKS
QUALITY OF WORK	ACCURACY OF PRODUCTION	MANY ERRORS & SPOILED WORK 4	CARELESS 2	AVERAGE 6	CAREFUL 2	MOST ACCURATE 4			
	CARE OF WORKING SPACE	SLOVENLY 2	CARELESS 1	AVERAGE 3	KEEPS SPACE CLEAN 1	VERY CLEAN AND ORDERLY 2			
	HANDLING OF MATERIAL	ROUGH 2	CARELESS 1	AVERAGE 3	CAREFUL 1	VERY CAREFUL 2			
QUANTITY OF WORK	SPEED OF PRODUCTION	VERY SLOW 4	SLOW 2	AVERAGE 6	FAST 2	VERY FAST 4			
	USE OF WORKING TIME	VERY WASTEFUL 2	LOAF WITH OTHERS 1	AVERAGE 3	GOOD 1	VERY BUSY 2			
	USE OF MATERIALS	EXTREMELY WASTEFUL 2	CARELESS 1	AVERAGE 3	GOOD 1	VERY CAREFUL & CONSIDERATE 2			
ABILITY TO DO OTHER WORK	ABILITY TO LEARN	DULL 1½	LEARNS SLOWLY ½	AVERAGE 2½	LEARNS QUICKLY ½	BRILLIANT 1½			
	ACCEPTANCE OF RESPONSIBILITY	BUCK PASSER 1	EVADES IT ½	AVERAGE 1	LIKES IT ½	SEEKS IT AND HANDLES IT WELL 1			
	INITIATIVE	LIVES IN A RUT 1	SELDOM OFFERS SUGGESTIONS ½	AVERAGE 1	RESOURCEFULLY SUGGESTIVE ½	VERY ORIGINAL 1			
	ABILITY TO DIRECT THE WORK OF OTHERS	ANTAGONIZES 1	HINDERS ½	AVERAGE 1	HELPS ½	EXCELLENT LEADER 1			
ATTENDANCE		VERY POOR 4	POOR 2	AVERAGE 6	GOOD 2	EXCELLENT 4			
CO-OPERATION	ATTITUDE TOWARDS COMPANY	ACTIVELY ANTAGONISTIC 2	PASSIVELY ANTAGONISTIC 1	NEUTRAL 3	CO-OPERATES PASSIVELY 1	CO-OPERATES ACTIVELY 2			
	ATTITUDE TOWARDS SUPERIORS	DISREGARDS WISHES 1	FOLLOWS ORDERS LIKE SOLDIER ½	NEUTRAL 1½	FOLLOWS ORDERS CHEERFULLY ½	TRIES TO HELP MAKE GOOD 1			
	ATTITUDE TOWARDS FELLOW WORKMEN	PUTS BLAME FOR ERRORS ON THEM 1	LOOKS DOWN ON THEM ½	NEUTRAL 1½	HELPS THEM WHEN TOLD ½	EXTREMELY CONSIDERATE 1			
SAFETY HABITS	ATTITUDE TOWARDS SAFETY PROGRAM	DESTRUCTIVELY CRITICAL 3	FOLLOWS RULES DISINTERESTEDLY 1½	NEUTRAL 5	OFFERS A FEW SUGGESTIONS 1½	EXTREMELY HELPFUL 3			
	OBSERVANCE OF SAFETY RULES	OPENLY DISREGARDS 3	BELIEVE DISREGARDS WHEN NOT WATCHED 1½	AVERAGE 5	OBSERVES ALL MAJOR RULES 1½	OBSERVES ALL AND HAS OWN 3			
	ACCIDENT RECORD	MAJOR INJURIES THRU CARELESSNESS 1½	MANY MINOR INJURIES ½	AVERAGE 2½	FEW MINOR INJURIES ½	NEVER GETS MINOR INJURIES 1½			
PERSONAL HABITS	MORAL CHARACTER	KNOWN VERY BAD 2	QUESTIONABLE 1	AVERAGE 3	GOOD 1	OUTSTANDING 2			
	PHYSICAL CONDITION	VERY POOR 1	MANY MINOR AILMENTS ½	AVERAGE 1½	GOOD ½	VERY GOOD 1½			
	GENERAL APPEARANCE	SLOVENLY AND DIRTY 1	CARELESS ½	AVERAGE 1½	NEAT AND CLEAN ALWAYS ½	EXCEPTIONALLY PLEASING 1			
									← TOTAL NUMERICAL GRADING

______ RATED BY—(FOREMAN) ______ ASSISTED BY—(TITLE)

______ CHECKED AND APPROVED BY—(SUPERINTENDANT) ______ NUMERICAL GRADING BY

Fig. 10.

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[1] Scott, Walter D., R. C. Clothier, and S. B. Mathewson, *Personnel Management*, p. 199.

1. In general, the close agreement between foremen concerning their workers justifies the use of the ratings as an index of the general value of employees.

2. Ratings secured from two supervisors can be used safely for permanent records if they agree within one-letter step on the final letter scale. Whenever a disagreement of two or more letter-steps occurs, a conference should be held with the disagreeing judges and reratings secured.

This analysis shows that there are at least some qualities basic to a well-qualified applicant for work which are not subject to rigid test and measurement, but which nevertheless should be evaluated in passing upon the worker. Chief among these qualities are such attributes as initiative, cooperation, loyalty, appearance, tactfulness, executive ability, resourcefulness, ambition, and creative ability. Human personalities have to evaluate these qualities; men have always rated each other with regard to these characteristics. If the limitations of such ratings are properly recognized, they may be valuable techniques in the scientific selection of work people.

CHAPTER XI

TESTS AS AN AID IN GENERAL SELECTION

The Function of Tests in Selection and Placement.—While the best final test of ability always is actual production, psychologists are agreed that there are certain human qualities which can be tested and quantitatively measured in advance of service. Chief among this group are mental ability, physical fitness, strength, dexterity, skill, and technical knowledge.

The application of tests in the selection and the placement of employees represents an attempt to escape from the uncertainty and fallibility of human judgment. Through the medium of intelligence and other tests an effort is made to determine the real ability of applicants in quantitative terms, and to eliminate as far as possible the more or less uncertain factor of subjective judgment often ruled by either conscious or unconscious personal prejudice. Intelligence tests attempt to measure the general mental capacities of the individual, to determine whether or not the applicant has the capacity to learn certain tasks regardless of actual experience or training. Physical tests attempt to determine whether the applicant has the necessary physical strength. Aptitude tests, special trade tests, and ability tests, on the other hand, attempt to determine whether the individual's innate and acquired qualities equip him to do specified tasks efficiently.

Every industry has its quota of men and women who are incapable of filling satisfactorily the positions to which they have been assigned. High labor turnover, inferior workmanship, and a poor product are the inevitable concomitants of this situation. Maximum production is dependent not only on mechanical and material factors, but also upon men and women who are physically, mentally, and technically adapted to their work. But physical defects, mental inferiority, and trade incompetency are not always discernible from appearances. Thus, in response to this need, certain tests have been or are still being developed to aid in scientific selection and placement work. We are concerned first with the methods of selection through the application of general intelligence tests.

Requirements of an Acceptable Intelligence Test.—Intelligence tests proved of considerable value in the United States Army during the World War.[1] The results obtained under the supervision of trained psychologists led to the general conclusion that the rating which a man earned furnished a fairly reliable index to his ability to learn, to think quickly and accurately, to analyze a situation, to maintain a state of mental alertness, and to understand and follow instructions, all of which are fundamental elements in general intelligence.

With this background of experience it was natural that there should be a demand for the application of mental tests to industry. Is there any relationship between a factory worker's intelligence and his success and stability? Can intelligence tests be used to advantage in selection and placement of factory operatives? These queries had common currency. It was believed that such tests would aid materially in preventing the employment of the mentally unfit, selecting workers of superior intelligence for positions requiring a high degree of mental ability, introducing a more rational system of laying off men, selecting workers for new processes, recruiting men for advanced study courses leading to executive positions, and assuring scientific administration of transfers and promotions. Many were confident that most of the great waste incident to faulty placements could be eliminated, if objective measurement of individual differences between applicants could be enlisted as a supplement to the subjective judgment of interviewers.

The hope of such results led to considerable experimentation with mental tests in business and industry. The failure to discover any close correlation between intelligence test scores and the common criteria of achievement—wage rates, wage advances, promotions, and turnover—is often attributable to the disregard of certain fundamental principles and requirements. Among the first essentials of a good mental test are standardization of conditions, time limit, and method of scoring. Uniform instructions should be provided so that all persons applying the test will administer it in the same way, and care should be taken to preclude variation in the conditions under which the test is given and the method of determining results. A second requirement is that such a test shall be a test of mental alertness and intelligence rather than of acquired knowledge or education. Considerable difficulty has arisen because inexpert persons used the test to determine a knowledge of facts rather than to discover intelligence. If the test is to be administered to large groups, it should be self-explanatory so as to preclude the necessity of long and repeated explanations.

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[1] For a discussion of the Army tests, see reference list for this chapter.

A good intelligence test will constitute a fairly accurate index of the mental alertness of the applicant. The results will reveal his judgment, memory, and type of response to given situations; his ability to learn and follow instructions and maintain attention; his ability to observe and describe the elements of a situation. Finally, tests should be so constructed that they can be scored by a mechanical system of stencils and that scoring can be completed easily, speedily, and accurately.

Selection by Intelligence Tests.—Intelligence or mental alertness tests are designed to determine general mental ability, not to measure acquired skill or proficiency in any given position or occupation. By general intelligence is meant "mental capacity, learning ability, ability to adjust to new situations."[1] This capacity is innate and fixed. For purposes of selection and placement, the relevant questions are: To what extent are different degrees of intelligence (as measured by tests) required for the work of different occupations? To what extent are degrees of success within an occupation correlated with degrees of tested intelligence? And, finally, what is the mental capacity of the applicant—is it high enough to qualify the worker in general and in particular as a valuable employee? Generally speaking, men at different occupational levels tend to have distinctly different inherent ability or native intelligence. Superior classes of work are likely to be performed by people possessing the highest degrees of inborn ability; low grades of work are performed by those who, because of the factor of heredity, possess low degrees of innate capacity. This new phase of the field of industrial psychology has made such notable progress in recent years that it seems wise to examine briefly the leading types of mental tests.

The most widely used form of intelligence tests consists of a printed collection of various questions and problems given to groups of people in a manner similar to school examinations. One type of Army test (Beta) is nonlanguage in character, while another type (Alpha) requires some facility in reading English. The Army Alpha tests were first prepared by the Psychology Committee of the National Research Council, and were given to men during the

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[1] KORNHAUSER, ARTHUR W., "Intelligence Test-Ratings of Occupational Groups," *American Economic Review, Supplement*, vol. 15, no. 1, March, 1925, p. 118.

World War, chiefly for Army classification purposes. Since that time the Army tests have been refined and have been used in the quantitative measurement of the native intelligence of thousands of adult persons in schools, colleges, business, industry, and commerce throughout this country.

Broadly speaking, these tests follow a fairly standard pattern. The Army Group Examination Alpha, Form 9,[1] for instance, is made up of eight different tests. The first question in Test 1 presents five circles, each ½ inch in diameter, and allows 5 seconds for a cross to be made in the first circle and a figure 1 in the last circle after the instructions have been orally given by the tester. Other illustrative questions and problems are:

Test 2:	
20 questions. Time limit, 5 minutes.	If you buy 2 packages of tobacco at 7¢ each and a pipe for 75¢, how much change should you get from a $2.00 bill? Answer($1.11)
Test 3:	
16 questions testing common sense. Time limit, 1½ minutes. *Instructions:* Make cross in square before the best answer.	If a drunken man is quarrelsome and insists on fighting you, it is usually better to ☐ knock him down ☒ call the police ☐ leave him alone
Test 4:	
40 sets of words meaning nearly the same or opposite thing. Time limit, 1½ minutes. *Instructions:* Draw line under "same" or "opposite" according to which the pairs of words are.	(19) haggard-gaunt same-opposite (35) carnivorous-herbivorous same-opposite
Test 5:	
24 mixed true-false sentences. Time limit, 2 minutes. *Instructions:* Mark whether true or false after sentence is thought to make sense.	(10) Thunders rains when it always it true-false (20) To aid deep great snow a military manoeuvres is true false
Test 6:	
20 sets of numbers. Time limit, 3 minutes.	25 25 21 21 17 17 13 13

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[1] Army Group Examination Alpha, United States War Department, Washington, D. C.

Instructions: Look at each row of numbers, and on the two dotted lines write in the two numbers that should come next.

3 4 6 9 13 18 24 31

Test 7:

40 sets of related words. Time limit, 3 minutes.

Instructions: In each line the first two words are related. Determine this relationship, and then underline the word following the third word which is related in the same way.

(16) hunter-gun::fisherman-fish-net-cold-wet

(36) mountain-valley::genius idiot write-think-brain

Test 8:

40 incomplete sentences. Time limit, 4 minutes.

Instructions: After carefully reading the sentence underline the extra word making the sentence complete and correct.

(4) The most prominent industry of Chicago is packing brewing automobiles flour.

(31) Little Nell appears in Vanity Fair Romola The Old Curiosity Shop Henry IV.

Other well-known intelligence tests include the Terman and Binet tests, the Otis Self-Administering Test of Mental Ability,[1] and the Series I Mental Alertness, tests[2] especially designed for commercial and business needs. The Otis test is composed of seventy-five questions and problems of same-opposite, true-false, completion, proverbial, related words and sentences types, and simple problems of mathematics and logic. The test, however, is unlike the Army tests in that it is given as a unit without time subdivisions for various types of questions and problems, the time limit usually being either 20 or 30 minutes for the entire examination. All standardized tests of intelligence are tried out experimentally and evaluated before they are used as a measuring device, for it must be certain that scores agree with the known ability of people who are experimentally tested. A test should be accepted only after this procedure has been followed.

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[1] Published by the World Book Company, Yonkers-On-Hudson, N. Y., and 2126 Prairie Ave., Chicago, Ill.

[2] Published exclusively by C. H. Stoelting and Company, Chicago. This test is composed of six parts particularly designed to measure mental alertness, perception, ability to follow instructions, logical reasoning, and accuracy of judgment. The short time limit involved makes it particularly suitable to industrial usage.

One unusual type of mental test given to all applicants for work with the Carnegie Steel Corporation is in the nature of a single problem:[1]

> A railroad train had a crew of three, and three passengers, traveling between Chicago and New York. The train crew is made up of an engineer, fireman, and a guard. Their names are Smith, Jones, and Robinson, but not necessarily in that order. The passengers are Smith, Jones, and Robinson, but will be referred to as Mr. Smith, Mr. Jones, and Mr. Robinson.
>
> Mr. Robinson lives in New York. Mr. Jones' annual salary is $5,000. The guard lives halfway between New York and Chicago and his namesake among the passengers lives in Chicago. The guard's closest neighbor is one of the passengers and his annual salary is exactly three times that of the guard.
>
> Smith beat the fireman at billiards.
>
> The problem is: What is the name of the engineer?

Results of Mental Tests in Industry.—Interest in general intelligence tests was greatly increased during and immediately following the World War. The use of tests for general hiring purposes is now becoming a well-established personnel function in many types of organization, such as civil service, certain professions, commercial and manufacturing companies. In manufacturing, for instance, perhaps as many as a third of the total number of larger companies are today using some type of mental test in general hiring.[2] There are ever-increasing experimental data which show marked correlations between mental alertness, on the one hand, and value ratings, occupational aptitudes, and production performance, on the other. The lowest scores of intelligence are often found among common laborers in trades requiring the least skill and training, with a graduation of mental alertness according to the requirements of the occupation. Following is a graphic form of mental alertness standards for various occupational groups (Test Series I) of a large manufacturing company.[3] In the department of one company where women office workers were employed, each employee was given a mental alertness test and, at the same time, was ranked in "general value to the company" by her respective supervisor with the results as presented in Table 3.[4]

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[1] *Reader's Digest*, vol. 21, no. 125, September, 1932, p. 55. Time range is 5 minutes to 2 hours.

[2] See results of a recent survey presented in *Factory Management and Maintenance*, vol. 94, no. 12, December, 1936, p. 39.

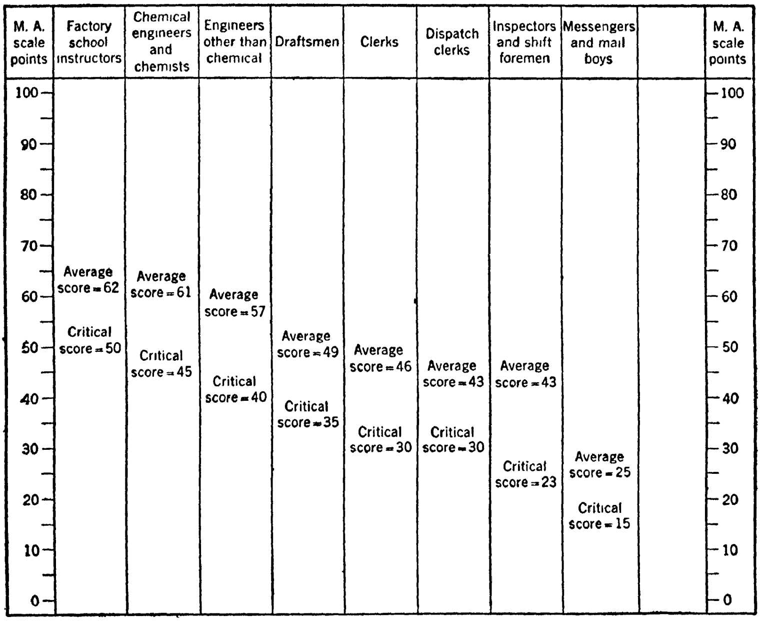
[3] Scott, W. D., R. C. Clothier, and S. B. Mathewson, *Personnel Management*, p. 256.

[4] *Ibid.*, p. 253.

Obviously many comparisons similar to this one would fail to show the relatively close correlation between mental alertness and supervisor ranking here disclosed because there are duties in many divisions of industry where mental alertness is no test of efficient performance, and there are many supervisors whose personal ratings are no true index to the worker's worth and productive capacity.

OCCUPATIONAL STANDARDS ON MENTAL-ALERTNESS TEST

For male applicants and male employees in a large tire manufacturing company



Note: If an applicant scores below the "critical score" for his occupation, he should possess compensating qualifications to be favorably considered for employment.

FIG. 11.

It has been estimated that the Otis test used in the scientific selection of life underwriters measures only 7 per cent of the successful attributes of salesmen in life underwriting.[1]

It is surprising, however, to learn of the large number of employers who keep mediocre and mentally deficient workers on the payroll and assign them to duties which they are not mentally equipped to perform. When such is the case, studies have shown that the poorer workers come and go in time, thus adding considerably to the turnover costs and diminishing the average per unit out-

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[1] STEWARD, VERNE, *The Technique of Testing in Agency Building*, p. 7.

TABLE 3.—COMPARISON OF MENTAL TEST AND AVERAGE SUPERVISOR RANKINGS OF OFFICE EMPLOYEES

Employee	Test score	Ranking by force	Average ranking by supervisors
A	49.0	1.0	1
B	48.0	2.0	6
C	45.0	3.0	3
D	44.5	4.0	4
E	42.5	5.0	5
F	40.0	6.0	2
G	38.5	7.5	7
H	38.5	7.5	8
I	36.5	9.0	11
J	32.5	10.0	14
K	32.0	11.0	13
L	30.0	12.0	9
M	28.0	13.0	12
N	24.0	14.0	10

put of work. A study comparing the range of mental alertness of women employees doing similar work in four different companies has shown the range of intelligence to be more than 2½ times greater in one than in another.[1] Again, in the case of messenger boys employed by a third company, approximately 35 per cent of those with a mental alertness score of 40 resigned over a period of time, while only 2 per cent of those with a score of 55 to 60 left the company during the same period.[2] In a fourth case which involved women clerks who were given a mental test at the time of employment, a rating, somewhat similar in principle to that suggested in Fig. 9 above, was called for from the supervisors at the end of 3 months. This rating was to indicate the general value of each employee to the company. Upon checking these data with the original scores of the test, it was discovered that almost invariably those who rated high in the general value also rated high in the original mental score and, conversely, those who were rated low by the supervisors made mental scores far below the average for the entire group.

The Los Angeles Gas and Electric Corporation reports the results of a comparison of two groups of employees, one group of 594 persons hired without being given intelligence tests and another group of the first 108 persons hired after this testing technique was initiated, as presented in the accompaying figure.[1] In concluding the analysis of these results, it is stated that:

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[1] SCOTT, CLOTHIER, and MATHEWSON, *op. cit.*, p. 261.

[2] *Ibid.*, p. 263.

> 1. Intelligence tests can be applied to a service organization in such a way as to multiply chances of successful selection. Scores in these tests do not tab and earmark applicants who will invariably succeed, but selections made within "favorable score ranges" increase the percentage of success.
>
> 2. Intelligence test findings will rule out some applicants who conceivably might succeed. The same statement could be made regarding any method of selection now in use. Not by any means infallible, test findings merely point to greater or less probability of success in given cases.[1]

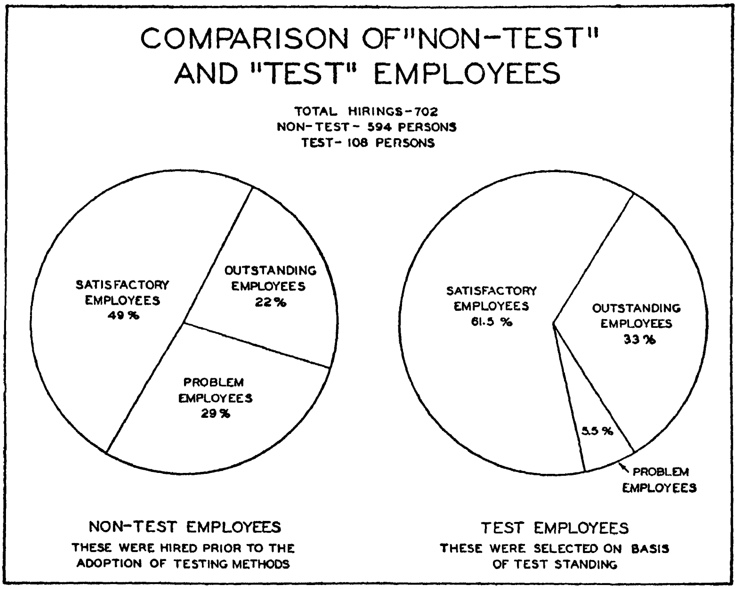

FIG. 12.

This company reports that these tests have definitely improved the technique of selection and that they have furnished measures of selection which otherwise could not have been obtained.

Another company reports that the adoption of the Num Score for toolmaking apprentices has led to an improvement of the quality of apprentices selected as much as was formerly accomplished in a year of trial in the course. The company has reduced the number of hirings necessary to maintain an even flow of satisfactory first-year apprentices and has reduced the turnover due to failure and, to some extent, length of time required to determine failure.[1] Tests for general intelligence, interests, ascendance, and extroversion were given to 556 new life insurance agents and 115 assistant managers. Later, in comparing the results of these tests with sales and job performance, it was found that:

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[1] WADSWORTH, GUY, JR., "Tests Prove Worth," *Personnel Journal*, vol. 14, November, 1935, p. 186.

> 1. Ascendance (ability to meet face to face) and extroversion (outwardly projected thoughts, social activities, etc.) to a moderate degree and intelligence above the lowest 20 per cent are reliable in predicting success in selling.
> 2. Education, experience, length of service, age, and nationality show no appreciable effect.
> 3. In cases involving assistant managers, personal data and intelligence are of greatest importance in determining success.[2]

But the director of medical research of R. H. Macy & Co., Inc., states that "on the whole, it appears that . . . the largest issue in successful salesmanship is a personality one, and this is better evaluated through the psychiatric method than the psychological."[3]

It has been previously stated that actual productivity is the best final test of the desirability and capability of any worker. In this connection, the results of a comparison made between mental test ratings and production records of several hundred employees of a large clothing company are enlightening:[4]

> Out of several hundred who took the test, two hundred and ninety cases were taken at random and were investigated to find out whether ability as shown in the test had any relation to productivity at the machines. This productivity was measured with reference to the standard as set by time study and computed in per cents. Four weeks was taken as a productive period and an average made of the operative's work per hour for the whole period. For example: If the standard set for a particular operation had been sixty units an hour and for the past four weeks an operator had averaged forty-five pieces per hour, the capacity would have been

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[1] POND, M., "What Is New in Employment Testing," *Personnel Journal*, vol. 11, June, 1932, p. 10.

[2] SCHULTZ, RICHARD S., "Test Selected Salesmen Are Successful," *Personnel Journal*, vol. 14, October, 1935, pp. 140, 142.

[3] ANDERSON, V. V., *Psychiatry in Industry*, p. 231.

[4] *American Statistical Association, Journal*, March, 1923, pp. 603, 604, 606.

A test was worked out, modeled more or less upon army tests. . . . It was composed of six different parts; recognition of geometrical objects, missing parts test, cancellation, a code test, cube estimation, and numerical sequence test. . . .

rated seventy-five per cent. Had the average been seventy-five pieces, the capacity would have been rated at one hundred twenty-five per cent. The cases selected had passed through the learning period and were working at what was assumed to be their normal rate. It was . . . a fair sample of the operator's work. . . . Although the mental test showed a fairly high relationship with the operator's performance at a machine, it was by no means complete or constant. There are undoubtedly a large number of factors that enter into the making of a skilled operator and insuring from that operator a steady flow of production. The above analysis tends to show that a definite minimum amount of intelligence or alertness is necessary. Beyond this the operator may still drag behind or fail, and one of the important causes . . . lies in the amount of incentive the operator brings to the work. To give an example, . . . almost without exception if a girl is required by her parents to turn over her complete earnings she does not work nearly so well as when an agreement is made with her parents that she be permitted to have for herself all above a certain stipulated amount. The emotional background is equally important; but to try to describe all the ramifications of this factor and its attendant social and cultural aspects would be far outside this study. . . . In summary, therefore, we feel convinced of the following points regarding the employment methods . . . in the Clothcraft Shops:

That the use of mental tests, although only a partial measurement, is the quickest, most accurate, and most economical method of prophesying future skill at machines and of placing operators at types of work most suited to their capacity.

Reasonably high correlations have been found consistently between intelligence test scores and achievement among clerks, office boys, stenographers, and various types of industrial workers. With workmen in a number of miscellaneous occupations, such as streetcar motormen, telephone operators, certain salespeople, detail inspectors, and waiters and waitresses, only slight and negligible correlations are usually found. Little or no correlation has appeared in certain applications of tests to higher executives and sales managers.[1]

The application of tests to a group of more than 100 boys in a Middle Western enterprise revealed a close correlation between test scores and later efficiency, wages, and turnover. After an interval of 2 years, test scores were compared with performance and service records. Of those who were still with the company, the boy who made the highest test was receiving the highest salary; the two who made the lowest test scores were getting the lowest salaries. Ninety-seven per cent of the boys who were promoted came from the highest test score group. The average score of the 29 who had been promoted to junior clerks was 46.2 per cent; the average score of those who were not promoted was 25.1 per cent.

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[1] For a further discussion of the concrete application of tests in industry and business see, A. W. Kornhauser, "Some Business Applications of a Mental Alertness Test," *Journal of Personnel Research*, vol. 1, 1922, pp. 103–122. For a discussion of the value of their application in the selection of insurance salesmen, see Verne Steward, *Selection of Sales Personnel*, 1936, and the *Use and Value of Special Tests in the Selection of Life Underwriters*, 1934. Also see Millicent Pond, "Selective Placement of Mental Workers," *Journal of Personnel Research*, vol. 5, no. 9, January, 1927, pp. 343–368.

Another interesting correlation of these data appeared between test scores and turnover. The average score of all the boys was 38.7 per cent. The 63 who were still with the company scored an average of 41.6 per cent, whereas the average score of the 48 who were no longer with the company was only 35.1 per cent. Those who had left for better positions had an average score of 44.7 per cent; those who were discharged had an average of only 28.1 per cent. The conclusion was reached that a boy is always as good as his test and may be better.

This company's experience taught it that the total test score is less important than its analysis and use. For example, the matching of invoices requires close attention to details and quick detection of errors. One boy scored 48 per cent in the general test and 6 per cent in detection of details; another boy had a general score of 42.5 per cent and 9.5 per cent in detection of details. These two boys were assigned to the position of matching invoices. The first lad, who had the lower score in detection of details, asked for a transfer after 6 weeks, while the other became an executive in this branch of the organization.

The presence of a large number of mentally inferior individuals in an organization cannot but have deleterious effects. They are unsystematic in their methods of work, neglectful and forgetful of duties, and frequently manifest a lack of punctuality, regularity, and responsibility. They are usually the most ready to give up their jobs at the slightest provocation and dissatisfaction, irrespective of the consequences, and often do so without having another job in sight. Moreover, there is a growing belief, based upon careful observation, that a considerable number of factory accidents are due to lack of intelligence.

Next to the mentally inferior workers are those with what are ordinarily termed "psychopathic personalities," that is, individuals who, though they are not lacking in intelligence or intellectual development, exhibit certain abnormalities of temperament and behavior. Often they are excessively egocentric in disposition, having an exaggerated opinion of their own ability and importance. They frequently leave the service of a company for little or no reason. A study of 100 unemployed cases entered as patients at the Psychopathic Hospital, Boston, Mass., showed that 65 per cent belonged to the psychopathic group, and that in almost every instance the cause of unemployment was this psychopathic tendency.

Limitations and Weaknesses of Mental Tests.—Far too much has been expected of intelligence tests in industry, and the over-enthusiastic have been disappointed with the actual results. No reputable psychologist will claim that such tests constitute an infallible instrument for the correlation of mental traits and occupational requirements. It is a fact of industrial experience that individuals tend to gravitate toward those occupations which are generally suited to their capacities and inclinations and that certain occupational levels present fairly definite boundaries over which some individuals are unable to pass readily and which others find impossible to scale. Occupational noncompeting groups are probably fixed more by hereditary differences than by environment, habit, or chance. Mental tests can aid materially in bringing about better adjustments between workers and their work by directing men and women into jobs and occupations for which they are mentally equipped; but the value of such tests in selection is probably much less than their value in general vocational guidance.

Mental tests are not adequate as a sole measurement of probable effectiveness in industry and business. Efficiency and success are partly dependent upon factors other than intelligence. The Army tests did not measure loyalty, bravery, power to command, and other natural traits that made men "carry on." These and many so-called "character traits" cannot be measured by a test of mentality. Honesty, sociability, kindness, cooperativeness, ambition, faithfulness, and loyalty are not always correlated with intelligence. It may be true that such desirable traits are more likely to be found among intelligent than among unintelligent individuals. But differences in opportunity and environment are too real to make sure that innate ability and achievement will always be correlated. Moreover, emotional and moral character are not yet measurable, and these are important in all divisions of life in which intellectual capacity is being measured. The human factor must always be more or less of a variable in the actual administration of tests.

A low score is not necessarily an index of inferior intelligence. The applicant may be physically indisposed at the time the examination is taken, or he may be excessively nervous; or family conditions, such as sickness, may prevent him from doing his best. Moreover, he may be unalterably opposed to any kind of test and make no attempt to reveal his real mental ability. Either because little intelligence is needed or because other factors are more important, there is often a surprising lack of correlation between intelligence rating and occupational skill. Finally, the public school system, through the elimination at various stages of those who can for intellectual reasons go no further, functions as a selective agent for industrial placement. Where children drop out of school for economic and other reasons not associated with inborn ability, this selective process does not operate.

The limitations of these employment tests have been summarized by an employment manager of a large department store:[1]

> At the present time we are not using tests, although as conditions improve and there is not quite as much pressure of detail, as well as fewer former and other experienced employees available, we plan to include certain test procedures whose principal function will be to eliminate from further consideration individuals lacking certain specific abilities recognized as being necessary to the successful conduct of a particular job. We believe that the successful use of any test results is almost entirely in the trained ability of those responsible for the selection in interpreting the test results in the general picture of the individual, particularly with regard to work and thinking habits, and the determining factor of the use to which abilities may be put.

But there is at least one other serious weakness to mental tests. It is clear from an examination of the contents of such tests that they do not fully measure innate intelligence as against acquired knowledge. Thus, there is a constant tendency in their use to place too little emphasis upon the applicant's ability to "swing into line" with the company and to acquire valuable knowledge as he grows and develops with it.

Intelligence tests, then, are not in themselves an adequate basis for selecting and placing employees. They must be supplemented by means of measuring physical vigor, dexterity, emotional quality, special abilities, and character. The matter has been appropriately summed up thus:

> No one familiar with the field of mental tests doubts the position of importance they will occupy in the future. The only danger at present lies in the indiscriminate use of the tests by persons not qualified to administer

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[1] BAKER, HELEN, *Personnel Programs in Department Stores,* Industrial Relations Section, Princeton University, p. 18.

them, and in cases where their application is not justified. As measuring devices for a serious purpose they can be used only by those who understand their nature and recognize their limitations.[1]

Physical Tests and Examination as Selective Aids.—A final basis of employee selection is that of the general physical examination and the various special physical tests that may be used to supplement it. Physical examinations are now generally recognized by industrial concerns as an integral part of personnel procedure. In a later chapter, we shall consider the details of a physical examination in relation to industrial medicine and hygiene. Our purpose here is to suggest its general aims and value in the process of choosing and assigning employees.

The relative importance of physical examinations in American factories is demonstrated by the results of a recent study completed by the United States Department of Labor,[2] covering 224 establishments of various types with a payroll of 387,826 employees. Of the total number of companies included, 114, or 51 per cent, required a physical examination of all prospective employees. In 8 companies, 3.6 per cent, such examinations were in use for a part of the employees, while in the remaining 102 plants, 45 per cent, no physical examinations were required. It is significant to note further that within the groups of establishments where a centralized employment or personnel office was maintained, as in oil and steel companies, by far the majority of employees were hired only after physical examination (82 per cent, or above). In contrast, however, among the establishments where only a few centralized employment offices were maintained, noticeably in the shoe plants and among the textile plants of the South, more than 80 per cent of the employees were hired with no physical examination of any kind.

The physical examination is designed to eliminate the expense and waste involved in employing persons physically incapable of doing their work efficiently, to protect other employees against contagious and communicable diseases, to prevent the new worker from being assigned to tasks that will overtax his physical powers and result in permanent injury, and to safeguard the consuming public from germs transferred to goods by disease carriers who may have handled them.

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[1] Poffenberger, A. T., "Psychological Examinations," *Scientific American Monthly*, vol. 3, March, 1921, p. 211.

[2] "Hiring and Separation Methods in American Factories," *Monthly Labor Review*, vol. 35, November, 1932, p. 4.

Most companies require as a minimum the passing of a general physical examination. In some industries, special senses must be strong in order to withstand constant strain upon them. In the manufacture of buttons, for example, the matching of colors and shades requires excellent eyesight, and employees who have weak eyes or who are color-blind are by no means to be assigned to this work. Likewise, color blindness in a railroad engineer would have disastrous results, so especial care is taken to examine such workers frequently in order to avoid the development of physical deficiencies that would affect their efficiency or endanger the safety of patrons.

In recent years, rather simple but effective mechanical devices have been made available as auxiliary tools in supplementing the general physical examination. For the testing of certain muscles in the arms and legs preparatory to placement in special jobs, where muscular lifting strength is an important physical quality, an instrument known as the "dynamometer" can be used. The foot operation of a lever on a heavy stamping or drawing machine might readily make possible the use of such an instrument. Where hearing is of great importance the "audiometer" is used in scientifically measuring its capacity. In the process of selecting streetcar motormen, the peripheral vision (arc of sight when eyes are at rest) must cover a certain field in order to permit such operators to keep their eyes "on the track" and still observe the presence of approaching traffic. Scientific tests measuring these arcs of observations are made by placing the applicant in a position facing the center of a semicircular black disk studded with small electric lights. One by one these lights are flashed on, and with the eyes still fastened to the center light in the semicircle, the applicant signals when lights farther and farther from the center can no longer be seen when turned on.

Most other testing devices for physical capacity are too complicated to have much practical value outside the psychologcal laboratory.

Because of the time and expense involved, the physical examination is not given until the applicant has been selected by the personnel department and if necessary approved by the head of the department to which he has been assigned. The nature and exactness of the physical examination vary with the requirements of the industry. In some instances it is ridiculously superficial and practically without value; in others it is thorough and yields beneficial results. When seriously applied, the physical examination endeavors to establish the individual's health status as regards contagious diseases and epilepsy; the soundness of his special senses, particularly sight and hearing; the condition of his throat and teeth, heart and lungs; and the presence or absence of hernia, varicosities, and flat feet, as well as general physical strength and fitness.

Many wage earners have a suspicious attitude toward physical examinations in industry, and labor organizations frequently oppose them. Fear of being rejected or of discovering a physical defect of which he is not aware is responsible for the individual's opposition. Organized labor objects on the ground that a physical examination is strictly a personal matter and that frequently it has been used as a means of discriminating against and rejecting members of a union and those in sympathy with the aims and methods of unionism. It is conceivable that an unscrupulous employer might use the physical examination as a means of "breaking the back of organized labor," but ordinarily it is administered for nobler purposes and opposition to it is usually unjustified and unwarranted. As a matter of fact, only about 3 per cent of those examined are rejected. Considerable educational work is sometimes necessary to make the workers see the advantages of physical examination, but interest and confidence frequently follow a fair presentation of its values.

Rejecting the Applicant.—Very often, for any one or several reasons, it is necessary to reject persons who apply for employment. No positions may be available; possible positions may be unsuited to the physical and mental qualifications of the applicant; he may not possess the requisite mental ability, skill, and experience; his references may be weak; his personality may be negative; or he may have worked for the firm before and his previous record is not such as to warrant his reemployment. Sometimes the applicant's general appearance and his attitude toward the inquiries put by the interviewer impress the latter unfavorably. Not infrequently individuals come from plants that are known to be having labor trouble or in which the grade of workmanship is known to be inferior.

Whatever the reason for rejecting an individual, an enlightened labor policy demands that he be sent away with a cordial and grateful feeling toward the company because of the courteous treatment he has received in the employment or personnel office. It is just as easy to turn men away graciously as it is to turn them away abruptly. A simple explanation will suffice to leave a good impression of the company on the mind of the applicant. This does not preclude a frank statement of the reasons for rejection in cases where a previous bad record, lack of proper qualifications, or some other consideration is the deciding factor. It is well always to remember that the man who is seeking work is no less human than those who are employed, but that for the time being he is less fortunate. Often, he is a workman with an excellent record who is temporarily unemployed because of economic conditions over which he has no control. In some cases he may be already employed and just seeking a chance to better himself. He should not be given false hope, but he is deserving of kindly treatment regardless of his qualities and hopes.

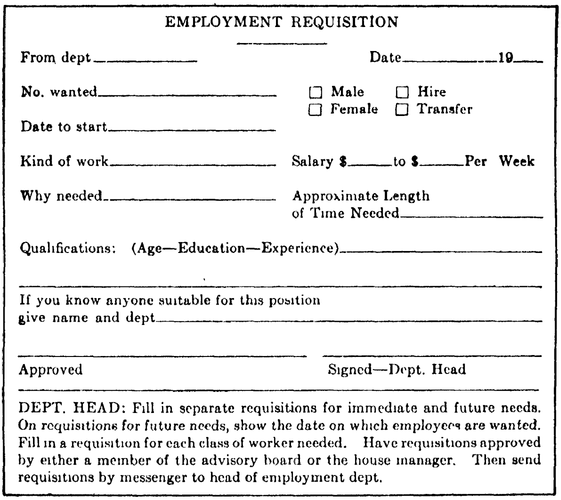
CHAPTER XII

SCIENTIFIC PLACEMENT: PRINCIPLES AND PROCEDURE

Relationship between Selection and Placement.—It must not be concluded from the discussion in the preceding chapters that the function of selecting labor is centralized completely in the personnel office, nor that selection is efficiently carried on without specific regard for the positions to be filled. In fact, the personnel manager seldom assumes full responsibility for determining the standards of selection or the labor requirements of any division of the organization except those of his own office. But when a scientific analysis of the requirements of each task or position has been accomplished through job standardization, as described in Chap. VIII, the personnel office is quite able to fill efficiently the labor needs of the various divisions of the organization. This function is best performed by means of close cooperation between the personnel department (central employment office) and all other departments of the company. Thus the problem of selection discussed above in reality becomes the dual problem of selection and placement. Selection is never fully completed until placement has been made, since placement invariably follows selection sooner or later. It is only because of the high degree of specialization that has worked itself into the field of personnel administration, as in most other fields related to industry, that these two functions of selection and placement at times appear to be separate and distinct.

It has been suggested that this apparent division exists largely because of certain standardized practices, chief of which are job specification and standardization, and the procedure of employment requisition. When every task in the organization has been analyzed and standardized so that positive minimum specifications for the completion of the task have been established, it becomes a relatively simple matter for the personnel office to select individual workers whose mental and physical make-up and experience or aptitudes indicate that they are best fitted for the job in question.

When specific jobs requiring concrete qualifications are available the function of selection is broadened to include simultaneously that of actual placement. Under these conditions the personnel office is not choosing employees whose mental and physical characteristics, when improved by intensive training, will qualify them for specific tasks. On the contrary, under these circumstances the worker is to be picked for the job, not trained for it. Both types of functions—selection alone, and selection and placement combined—are being performed constantly by the personnel and employment divisions of practically all important organizations, and it is difficult to say which is the more important. Unquestionably, the general practice is to select the applicant for immediate placement.



EMPLOYMENT REQUISITION

From dept________ Date________19__

No. wanted________ ☐ Male ☐ Hire

☐ Female ☐ Transfer

Date to start________

Kind of work________ Salary $____to $____Per Week

Why needed________ Approximate Length of Time Needed________

Qualifications: (Age—Education—Experience)________

If you know anyone suitable for this position give name and dept________

Approved Signed—Dept. Head

DEPT. HEAD: Fill in separate requisitions for immediate and future needs. On requisitions for future needs, show the date on which employees are wanted. Fill in a requisition for each class of worker needed. Have requisitions approved by either a member of the advisory board or the house manager. Then send requisitions by messenger to head of employment dept.

Fig. 13.

Requisitions for Help.—In large organizations, selection with specific placement in view is usually accomplished by means of the employment requisition. Requests for man power usually come directly from the heads of departments to the personnel office where they are carefully scrutinized by the supervisor or manager. If the personnel program is only slightly developed, the requisition specifications must be quite complete, setting forth such items as the number of workers desired; education, training, and experience necessary; personal qualities preferred; and conditions and duties of employment, including the work or task to be done, wage rates, hours, and general character of the work place.

In establishments where job specifications have been made, such a detailed requisition blank is unnecessary. The only items required are the name and symbol of the job, number of workers wanted, and the date on which they are to report for work. The form shown in Fig. 13 is typical of the requisition card used in industrial plants. In large enterprises the employment office sometimes adopts the practice of keeping a "Requisition Summary" which indicates at a glance the labor needs of each department and the number of jobs that have been filled, thus giving a perpetual inventory of the employment situation.

Department heads and foremen often fail to forward their requisitions to the employment office far enough in advance to allow for careful selection of employees. This neglect is responsible for considerable difficulty, especially when skilled and experienced workers are needed, because it is not always possible for the employment department to recruit the type of workmen qualified for the vacancies. All requisitions for labor should be forwarded as far in advance as possible; "rush" or "extra-rush" orders should be prohibited except in extreme emergencies.

Special Ability Tests.—As already suggested, industrial experience has proved that for certain classes of occupations mental ability has little economic significance, even though selection in general is aided through the application of the mental and physical tests already discussed. With the coming of the automatic machine and division of labor, however, the demand upon intellectual resourcefulness is often relatively insignificant, so that morons may be the best machine tenders and intelligence may be a positive detriment. On the other hand, certain kinds of work require a high degree of special ability. The chief task of scientific management is to direct these differently equipped workers to the posts in industry and commerce where they are most contented and productive. This is no small task.

Several different types of tests have been devised to aid in the duties of proper placement of workers. One type, the aptitude test, is designed to detect inclinations and propensities, either natural or acquired, for doing certain types of work. The aptitude test measures such natural abilities as perception, speed, accuracy of movement, keenness of vision and hearing, sensitivity to changes of body position, and sensitivity to color and tones. There are numerous forms of these tests, but among the best known are the Wiggly Block and the Special Relations tests. Certain salespeople, machine workers, streetcar operators, and railroad engineers are often placed by such tests. A special type of aptitude test is the Finger Dexterity Test or the Pinboard Test, especially designed to measure the speed and steadiness with which the fingers of the hand can be moved up and down. This test involves the use of a large flat surface panel, at one side of which are numerous wooden pegs or pins. A large part of the panel is perforated with various sized holes, and the applicant is carefully timed in placing all the pegs, sometimes three at a time, into the appropriate holes on the panel. This is of particular value in the choice of typists and telephone switchboard operators.

The great difficulty met in preparing this type of test is the determination of the special abilities required in specific occupations. What appears to be a simple operation to a layman may, from a psychological point of view, subdivide into fifteen or twenty special functions. The work of a telephone operator, for example, is broken up into many special functions. This is fundamentally a matter of job analysis.

Special mental tests measure the various capacities of the mind. The mental faculties of basic importance in certain positions are power of attention, memory, imagination, judgment, reasoning, and capacity to make accurate and quick observations. Attention may be concentrated for a considerable length of time or it may be instantaneous. Some people commit to memory quickly and as quickly forget; others acquire slowly but have very retentive memories. Sense of space, that is, correct judgment of spatial dimensions, whether by eye or by the coordination of various muscles in the hands or arms or legs or feet, is very important for certain occupations and professions. In numerous trades, delicacy of perception is essential; sense of touch is indispensable in others. An insufficiently sensitive touch means failure to discriminate between various grades of woolen, linen, and cotton goods, which would be costly in the case of a buyer for a mercantile house. Likewise, a fine touch is necessary for all trades in which materials have to be handled and instantly rated, as for carpenters, joiners, turners, and furniture makers. Speed and accuracy are indispensable requisites of an efficient stenographer. Special abilities tests of various kinds have resulted in classifying workers fairly close to their known proficiency, and are accepted as very valuable in selection and placement.

Achievement tests also serve an important role in proper selection. These tests measure the accomplishments of the worker—his past experience, education, observation, and acquired factual knowledge. They are of great aid in detecting the skill with which a machinist will attend a complicated lathe and in determining whether he knows the right thing to do in repairing an emergency breakdown. Most trade tests are nothing more than special forms of achievement tests, since they deal in the measurement of acquired knowledge in the performance of special trades.

Last to be considered are the emotional tests, those which deal with the emotional reactions of the human being to his environment; his mannerisms, sensitivity, personal traits; his personality and character. Needless to say, these are among the most difficult of all human traits to measure; yet they are among the most important in determining whether a placement will be successful.

Achievement Tests.—Of all the special ability tests available to the personnel manager, the achievement or trade test is of greatest practical value. Many people view with scepticism the idea that a workman's degree of skill can be determined by tests requiring only a few minutes to administer. They insist that a month of careful observation is necessary in order to classify workmen justly and accurately. Such persons are surprised when informed that successful measurements of skill have not only been developed, but can be administered by examiners who are not skilled in the trade for which the test has been devised. Better results are possible if prolonged observation is made of a workman on the job, but such a process is too long and too costly, especially when the company is large and considerable numbers of men are added to the force daily. A man's word and the record of his trade experience are frequently inadequate and unreliable evidence of his trade ability, because, as a rule, these must be verified by reference to other, and perhaps competitive, institutions, which may be motivated by a desire to retain the good will of employees generally. Hence trade tests are a necessity for purposes of economy. Efficiency and proper selection and placement are inconceivable without them.

Trade skill means that a workman possesses a systematized body of knowledge relative to the various elements of his trade and has the capacity to execute the various movements and do the numerous operations, not only singly but in combination. It "implies something more than mere automatism or a fixed set of habits, namely, the ability to perceive and correct a faulty adjustment at any moment."[1] Gilbreth explains skill by suggesting that it is "dexterity, plus knowledge which can adapt itself to changing situations and is capable of improvement."[1]

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[1] ACHILLES, PAUL STRONG, "Some Psychological Aspects of Scientific Management," *Journal of the Society for the Advancement of Management*, vol. I, no. 3, May, 1936, p. 69.

In determining trade proficiency, oral tests are sometimes used because they are economical and easy to administer, being applied to large numbers of men in a comparatively short time and without equipment. Recently, however, several standardized written tests have been made available for testing certain types of applicants, such as file clerks and stenographers. The Thurstone Examination in Typing,[2] for instance, is a written form composed of three separate tests. The first calls for speed and accuracy in retyping a page from the corrected first copy of a manuscript. Test 2 necessitates the typing, in proper form and space, of a number of unsorted inventory records; and Test 3 is a spelling test of fifty words, some of which are misspelled on the test sheet. The complete test takes approximately five minutes, and instructions are self-explanatory.

The Thurstone Examination in Clerical Work, Form A,[3] is composed of tests involving speed and accuracy in checking errors or misspelled words in text form; the crossing out of specific letters in a long line of unsorted letters; the matching of specified letters for figures from a leading key; the sorting of names and cities from a table; the transposing and rearrangement of numbers; the computation of problems involving fractions, decimals, and percentages; and, finally, the matching of proverbs with similar meanings. The final score depends upon both speed and accuracy.

An effective supplementary technique in this type of test is to be gained through the use of pictures. In a picture test, a toolmaker may be shown a group of blue prints calling for operations on different machine tools and asked to name, offhand, various machines which are required for the performance of each operation; likewise a machinist may be shown a picture of a collection of machine parts and asked to name them. When written and picture tests seem an insufficient means of discovering the degree of skill, an applicant is sometimes given an opportunity to demonstrate his ability by performing some representative task. Many companies still prefer the performance method and rely upon it exclusively. Experience suggests, however, that it is better to use all three techniques as supplementary agencies in the determination of trade ability.

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[1] Gilbreth, Lillian M., *Trained Men*, Autumn, 1930. (International Correspondence School).

[2] Thurstone Employment Tests, Examination in Typing, Form A, World Book Company.

[3] *Ibid.*

Perhaps next in practical importance are the aptitude tests. Here also, written standard tests have become available. The Stanford Scientific Aptitude Test,[1] which has been designed for the purpose of detecting the inclinations or special abilities of college people, contains exercises of which the following are samples:

> Exercise 1. Suppose you have plenty of leisure and the necessary means for meeting the situation described. Check (x) frankly the statement which comes nearest to the way in which your first impulse would lead you to handle the matter. . . .
>
> IV. While freezing some ice cream you became interested in obtaining the lowest possible temperature from a mixture of ice and salt, but found contradictory statements in two books as to the proportion of salt and ice.
>
> 1. ☐ Take a portion of ice and salt that is an average of those suggested by the books.
> 2. ☐ Mix ice and salt in suggested portions and check the information given in the books.
> 3. ☐ Call up an ice cream factory and secure the information needed.
>
> Exercise *A*. Rank the following definitions of an automobile according to their merit; that is, write 1 in the square next to the best definition, 2 next to the second best, etc.
>
> ☐ An automobile is a mechanical vehicle which is gradually supplanting vehicles drawn by horses.
> ☐ An automobile is a self-propelling carriage driven by a gas engine.
> ☐ An automobile is a self-propelling vehicle, ordinarily on four wheels, not directed by tracks, and traveling on roadways or streets.
> ☐ An automobile is a self-propelling carriage, ordinarily on four wheels, driven by a gas or steam engine, or by an electric motor.
>
> Exercise *E*. Write a check (x) in the square next to the correct answer to the questions listed below.
>
> 1. What will be the average cost of living in this country in the year 3000?
>
> ☐ 1. About $50 per month per capita.
> ☐ 2. About $100 per month per capita.
> ☐ 3. About $200 per month per capita.
> ☐ 4. About $300 per month per capita.
> ☐ 5. Over $300 per month per capita.
> ☐ 6. If unable to answer put a check here.

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[1] Stanford Scientific Aptitude Test, Stanford University Press, 1930.

Exercise *J*.

II. There is a train leaving City *A* every hour (on the hour) and going to City *B*. At the same time another train leaves City *B* going to *A*. The journey lasts exactly 20 hours. You took a train from *A*. How many trains did you meet on your way to *B*, counting the one that reaches *A* at the moment of your departure and the one that leaves *B* at your arrival?

☐ Answer here

If you don't enjoy this type of problem, put a check here: ☐

Exercise *K*.

1. A physicist wanted to measure the length of a fine wire with precision; for this reason he measured it several times. Below are given the results of his measuring.

1st measuring 13.63 cm.	4th measuring 13.14 cm.
2d measuring 13.13 cm.	5th measuring 13.15 cm.
3d measuring 13.12 cm.	6th measuring 13.16 cm.

What is the probable length of the wire? Answer here: ☐

Exercise *O*.

I. The "Evening Star" correspondent writes from City *X*: "A plan was offered by *X*, located on the shore of Lake Ontario, by which it was proposed to generate at low cost electric light and power for the vicinity. The method consisted of digging a deep pit in the lowest part of the shore, at the bottom of which the plant was to be located. The cost of equipment for the plant would be relatively low, as it would consist only of generators run by turbines to which the lake water would be led through a large pipe."

At the meeting of the council various reasons were given by the members either for or against this project. Put an x in the squares next to the statements which you would endorse, and a — next to those to which you would object.

☐ 1. I am in favor of this project, for the plant will be almost as advantageous as any using a natural waterfall.
☐ 2. I oppose this project for the plan will never be practicable.
☐ 3. I am in favor of the project, for very cheap power would be generated by the proposed method.
☐ 4. I am opposed to the project, for such a plant would be very unsanitary.

The author of the MacQuarrie Test for Mechanical Ability[1] states that "no estimate of mechanical ability can be anything but rough. Nor is an accurate measurement necessary. There is no valid evidence at present to show that the carpenter requires more mechanical ability than the machinist, or that the house painter must develop greater skill than the plumber. A candidate for a mechanical trade should show a high degree of mechanical ability before money is spent upon his training. If we are to increase efficiency, we must train those best fitted for the work." Herewith are a few illustrations of the type of test suggested by MacQuarrie as suitable for checking mechanical ability.

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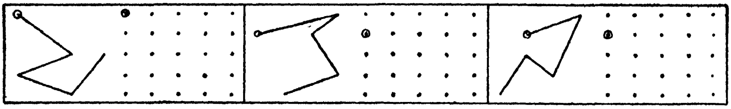
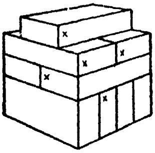
[1] MacQuarrie, T. W., MacQuarrie Test for Mechanical Ability, 1925.



COPYING TEST

TEST HERE IS TO REPRODUCE THE FIGURES IN BLACK LINES ON CORRESPONDING DOTS

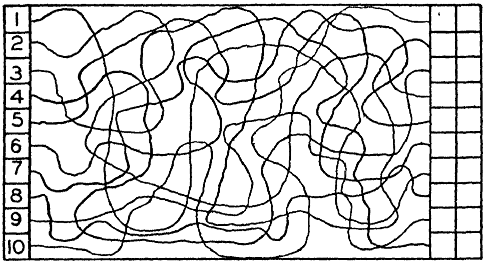
FIG. 14.



BLOCK TEST

HERE THE TEST IS TO DETERMINE QUICKLY THE NUMBER OF BLOCKS TOUCHING THOSE MARKED WITH AN X

FIG. 15.



PURSUIT TEST

HERE THE TEST IS TO PLACE ON THE RIGHT HAND SIDE OF THE LINES NUMBERS CORRESPONDING TO THOSE AT THE OTHER END OF EACH LINE

FIG. 16.

Principles Governing the Formulation of Placement Tests.—Trade and aptitude tests, like all mental tests, must first be tried out before being relied upon to discover the skill of a workman. The value of any trade test is not in its theoretical exactness but in its proved ability to select and classify correctly men of all degrees of skill within the trade. If the test does succeed in classifying men in the groups in which they are known by performance record to belong, then it can be relied upon to classify accurately men about whom nothing is known in advance of the examination. Before a test is used to select and classify new employees, therefore, it should be tried out on old employees whose trade skill is well known.

A good oral or written trade test conforms to certain fundamental principles. It is formulated in the exact language of the trade. The meaning of all questions is clear and each question is complete in itself, requiring no explanation. Catch and chance questions are avoided, as are questions which can be answered by "Yes" or "No." The questions call for brief and concise answers. After a process of critical selection, the seemingly most usable questions are given a preliminary trial on a number of craftsmen from different shops and plants to determine their general application and to avoid specialized methods or modes of expression which are current only in a given community. If a trade test is acceptable, a known expert when tested is able to answer all, or nearly all, of the questions correctly, a journeyman will answer the majority of them, an apprentice a small proportion, and a novice practically none. On the basis of these trial experiences and results, a critical system of scores is worked out.

Performance tests are devised by conference with experts in the trade and consist of some simple tasks that can be performed quickly and with a small amount of apparatus but which are adequate to indicate the degree of skill of the performer. These tests should require the smallest possible quantity of tools and materials, be capable of standardization, consist of work typical of that which is regularly performed, require not more than 45 minutes for completion by a journeyman, and comprise operations so exact that a standard correct form of product is always obtainable.

Skillful interviewing is frequently a good substitute for the administration of formal trade tests. By using a number of standardized trade questions, the interviewer can usually make an effective check upon the statements of an applicant relative to his trade knowledge and experience. When a standardized interview is based upon job analysis and personnel description, it is comparatively easy to check those essential points of information that should be covered in a good trade test. Industrial experience shows that trade language and knowledge of terms and measurements required in actual operation are highly correlated with trade ability, and that unless a man is actually an experienced workman he does not acquire the information on which a good trade test is based. When scientifically constructed and carefully given, however, both trade and aptitude tests can offer valuable aid in the most efficient placement of workpeople.

Analyzing Personality and Vocational Interest in Placement.—In dealing with human nature this field will remain indefinitely the "no-man's land," although scientific progress is slowly being made in attempts to predetermine an individual's reaction to given situations and environments through analysis of temperament, personality, and vocational interest. An applicant or a present employee may have keen powers of perception, generous mental capacities, special qualities that make him peculiarly adaptable to a certain type of work, and an abundance of physical strength and energy with which to complete a task. However, unless his temperament and personality are such that he can fit happily into his environment and cooperate with other minds and personalities with which he must inevitably come in contact in the course of the fulfillment of his duties, he will be of little value to the organization of which he is supposed to be a part, or to himself as a producer of goods or services. A progressive policy of personnel administration, therefore, makes it imperative for those responsible to do all that is humanly possible to fit temperaments, individual interests, and personalities into the organization in such a combination and balance as will insure greatest harmony, efficiency, and contentment. The degree of success with which this is done, if other principles of selection and placement have been followed, often makes the difference between a successful and an unsuccessful organization.

Personality determines the way in which an individual human being is able to get along, to live and work with others. It is a composite of many inherited and acquired characteristics. Emotional stability, neurotic tendencies, self-sufficiency or insufficiency, dominance, submission, despondency, egotism or inferiority complexes, melancholia, timidity, suspicion, self-preservation—these are the major forces which determine the individual's temperament and personality. Many reputable psychologists are now inclined to explain temperament as the resultant of all these forces simultaneously influencing the individual. In discussing the theory of temperament, it has been stated:[1]

> An important part of Rosanoff's theory of personality is the concept of abnormal behavior merely as uncontrolled manifestations of the same

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[1] HUMM, DONCASTER G., and GUY W. WADSWORTH, JR., The Humm-Wadsworth Temperament Scale, published by D. G. Humm, 651 N. Parkman Ave., Los Angeles, 1934.

temperamental components which actuate the normal individual. Stated otherwise, such components are present in some degree in the temperamental organization of every individual. . . . Each group of traits dealt with is regarded as a *component* of temperament. *Diagnosis* consists of identifying the component or components which appear to predominate or to be emphasized in the temperamental make-up of a given subject. *Analysis* of temperament requires measurement of each component present, whether manifest or latent.

Five classifications of components are made for the purpose of diagnosis and analysis:[1]

Component	Disorder in Which Observed
1. Normal	No disorder: proper balance
2. Hysteroid (or Antisocial)	Hysteria, criminalism
3. Cycloid:	
a. Manic phase	Manic-depressive psychoses
b. Depressed phase	Involutional melancholia
4. Schizoid:	
a. Antistic phase	Dementia praecox
b. Paranoid phase	Paranoic conditions
5. Epileptoid	Mental disorders allied with epilepsy

In explaining the chief characteristics of each of these components, Humm and Wadsworth state:[2]

> 1. The *"Normal" Component* is primarily a control mechanism, providing rational balance and temperamental equilibrium. It underlies the conservatism and conformity to socially acceptable conduct observed in the well adjusted subject. Essentially a "brake" or "balance wheel," the normal component presents mainly characteristics, associated with restraint, and persons in whom it is over-accentuated may be given to indiscriminating conservatism. In diagnosis, the term "normal" is rarely used alone except for such ultraconservatives. It is generally used in combinations such as "normal-cycloid," "normal-schizoid," etc., where it refers to individuals whose temperaments are under control, and who are essentially well adjusted, but who also show a large degree of cycloid or schizoid temperament. . . .
>
> 2. The *Hysteroid Component* is concerned essentially with self-preservation. An individual with an excess of this component possesses a character defect with ethically inferior motivation, manifested by malingering, stealing, lying, cheating, and similar anti-social behavior. A moderate degree of hysteroid tendency underlies much of our prudence, shrewdness and diplomacy, and may even contribute to social adjustment, since socially acceptable conduct often serves the ends of self-interest.
>
> 3. The *Cycloid Component* is characterized by emotionality, fluctuations in activity, and interference with voluntary attention. The *manic* phase

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[1] *Ibid.*

[2] *Ibid.*, p. 2.

is manifested by some degree of elation, pressure of activity and distractibility, together with such manifestations of excitement as jests, pranks, enthusiasms, impatience, etc. The *depressed* phase is manifested by some degree of sadness, lessened activity, dearth of ideas, and associated characteristics such as worry, timidity, equilibrium, hot-headedness, difficulty in sleeping, etc. Cycloid subjects are enterprising, sensitive to social situations, versatile, and sympathetic. They are handicapped by such tendencies as emotional thinking, lack of persistence, changeability of mood.

4. The *Schizoid Component* is characterized by heightened imagination. It leads to a tendency toward day-dream life, concerning which the subject is sensitive. The *antistic* manifestations are seclusiveness, shyness, suggestibility and the like, accompanied by an ability to visualize and to concentrate on special tasks, excluding diverting interests. The *paranoid* manifestations include stubborn adherence to fixed ideas, conceit, suspicion and contempt for the opinions of others, with behavior fitting these traits. In the presence of sufficient "normal" component, the paranoid phase is of value in pushing through programs which meet with resistance.

5. The *Epileptoid Component* is characterized by inspirations to achievement which are meticulously developed and pushed through to completion. It causes the subject to spend endless time in working out projects, and yet, at times, to appear inconsistent because of some contradictory inspiration. The inspirational tendency is often of a religious nature. There are sometimes explosive temper manifestations, often occurring on slight provocation, after long periods of endurance. Some physiological symptoms associated with epilepsy, as well as epilepsy, are likely to be present or to appear in the history.

Temperament is analyzed by means of answers to questions. The Humm-Wadsworth Temperament Scale Test, for instance, is made up of 318 questions, of which the following are illustrative. They call for either "Yes" or "No" answers; no time limit is placed upon completion:

Do you like to meet people and make new friends?	Yes—No
Have you several times been unjustly punished?	Yes—No
Do you sometimes find yourself so restless you can scarcely sit still?	Yes—No
Do you dislike having to rush in your work?	Yes—No
Have you ever caused a quarrel between friends by something you let slip?	Yes—No
Does it make you nervous to find yourself alone in a large space?	Yes—No
Do most people you meet interest you?	Yes—No
Are you inclined to be uncomfortably self-conscious?	Yes—No
Have you at times been provoked to the point that you have said or done things for which you were afterward ashamed?	Yes—No

Do you ever blush? Yes—No
Do you think there are a large number of people with unwholesome sexual morals? Yes—No
Can you understand people who tend to cling to their griefs and trouble? Yes—No
Have you had more than your share of worry? Yes—No
Have you at times made mistakes by being overly enthusiastic? Yes—No

The forms of most temperament scales, personality inventories, and adjustment inventories are similar in general content. The Personality Inventory test,[1] for instance, attempts to measure personality by analyzing neurotic tendency, self-sufficiency, introversion-extroversion, dominance, submission, self-confidence, and sociability. The Adjustment Inventory[2] test attempts to measure four separate phases of personal and social adjustment, as follows: home adjustment, health adjustment, social adjustment, and emotional adjustment. Here, too, the test is by means of questions.

Tests designed to detect personal interests, such as the Specific Interest Inventory,[3] the Vocational Interest Blank,[4] and Aids to the Vocational Interview,[5] present more general information. The Specific Interest Inventory, for example, does not attempt to determine vocational fitness, but rather analyzes certain tendencies which appear to be essential to vocational activities. Most of the answers to its questions, therefore, involve an expression of likes and dislikes, which when analyzed are of aid to supervisors and instructors in more intelligently guiding individuals into fields of study and special interest. The Strong Vocational Interest Blanks, on the other hand, list various occupations, amusements, activities, and peculiarities of people and call for an expression of order of preference among certain activities and studies.

Needless to say, few personnel managers or employment officers have either time or money to engage in vocational guidance work. In fact, far too often employers of labor are restricted in their utilization of well-tested intelligence and special tests for purposes of scientific selection and placement.

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[1] Bernreuter, Robert G., The Personality Inventory, Stanford University Press, 1935.

[2] Bell, Hugh M., The Adjustment Inventory, Stanford University Press, 1934.

[3] Brainard, Paul P., Specific Interest Inventory, The Psychological Corporation, 522 Fifth Ave., New York, 1932.

[4] Strong, Edward K., Jr., Vocational Interest Blank, Stanford University Press, 1930.

[5] Aids to the Vocational Interview, The Psychological Corporation, 522 Fifth Ave., New York, 1933.

In a Department of Labor study of the hiring methods of 224 American factories,[1] referred to in Chap. XI, only 14 enterprises, or 6.3 per cent of the total, by the end of 1932 had adopted any kind of intelligence, aptitude, or efficiency tests. Some of these tests were very simple ones in English, spelling, arithmetic, and geography. Others were somewhat more elaborate, such as a mechanical efficiency test for cabinetmakers of a furniture company, the Otis Test, O'Connor Number and Checking Test, Kent and Rosanoff's Word Association Test, and mechanical efficiency tests given to potential supervisors and executives of another company, an employment intelligence test for all office employees, and a finger dexterity test for all workers in the factory of a New England Company. Some firms, according to this study, require aptitude tests only for positions where employees handle expensive material which might be ruined through lack of skill. All firms where these tests had been adopted reported that results had justified their use. In another study, involving 153 reporting companies, inquiry showed that only 22 were using intelligence tests, 5 of which were manufactories, 5 department stores, and 12 in the general field of distribution.[2] It is significant to note that 10 of the 22 firms are located in New York City.

Doubtless some enterprises not actively engaged in manufacturing employ the use of tests in selection and placement more frequently than is indicated by the results of this study. These facts actually demonstrate a great deficiency in the use of valuable aids in selection, and suggest that many companies have room for almost unlimited progress along these lines. Techniques enabling the analysis of special aptitudes and interests and the vocational guidance of workers have already developed to a point where the employer is offered valuable aid in the wise placement of men and women in productive channels. Thus, it is important for those in charge to know of the accomplishments that are being made and to take advantage of these new techniques wherever possible.

Of what practical value are such checks and measurements to the employer? It must be frankly admitted that an acceptable appraisal is impossible. Too many combinations of traits and capacities have to be taken as a basis for the scientific selection and placement of workers to permit of the reduction of selection to one set of tests alone. Numerous characteristics—physical, mental, aptitude, personality, temperament, vocational interests—plus environment make a worker either efficient and contented, or inefficient and unhappy. Recent studies have shown that the old belief that only people equipped with certain traits could fit certain occupations is untrue. In everyday life, a man is successful in the performance of a certain duty if he can supply the thing that is demanded. A man may be a successful machinist if he has interest, capacity, and experience in his work, although his temperament may be such that he is hindered considerably in the exercise of this successful capacity. Another man, less skilled, with somewhat less interest in his work, may be equally good, or far better, because of his emotional stability, loyalty, and cooperation.

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[1] United States Department of Labor, "Hiring and Separation Methods in American Factories," *Monthly Labor Review*, vol. 35, November, 1932, p. 1005.

[2] FRYER, DOUGLAS, "Intelligence Tests in Industry," *Personnel Journal*, vol. 14, April, 1935, p. 322.

Personality and temperament tests, it has been suggested, deal with the least known and least tangible qualities of the worker. They are, however, no less valuable to the personnel director in his work if by their means it becomes possible, or more possible, to measure the qualities that a new applicant has to offer and, by such measurement, select and place him so that the task that he is assigned to perform calls for qualifications which he himself possesses and which can be used to the maximum advantage. What is true with regard to the placement of the new employee is also true of the older employee in respect to the many problems of discipline, promotion, transfer, and adjustment with which the personnel office is constantly asked to deal.

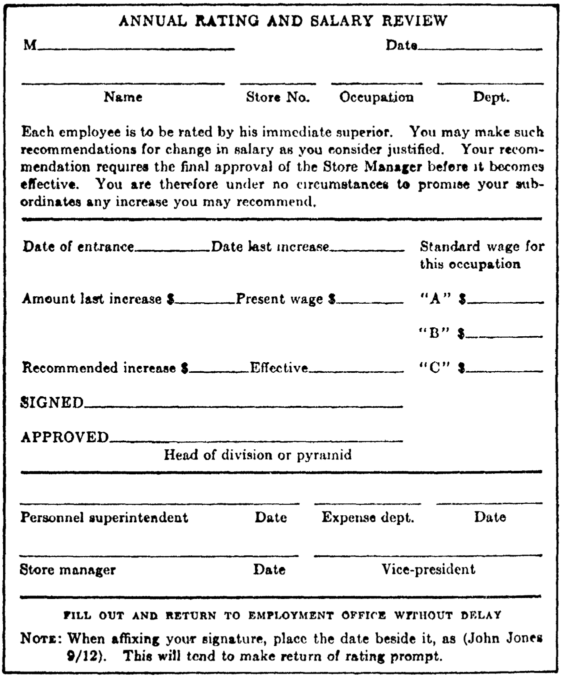
Introducing the New Worker.—There is an unwelcome strangeness about a new job and a new organization. Sometimes, in the case of large establishments, the new worker drifts in unnoticed by any member of the official family except his immediate boss and, after a time, silently leaves in a similar manner. Whether he is to be treated as a human being or merely as a machine is of vital concern to the wage earner. The human animal is a creature of impressions and impulses. With him first impressions are lasting ones. While he is seeking employment and in the initial days and weeks of his new job, his degree of sensitivity is high; his whole nervous system is likely to be keyed up. The treatment he receives in these first days and weeks will conduce either to good will and stability or to ill will and separation from the service of the company. The unfamiliar environment, the strange faces, and frequently the totally new kind of duties conspire to produce a condition of nervousness and a feeling of helplessness. Courteous treatment and sincere interest are never more appreciated than in such moments; conversely, never are discourtesy and the absence of interest more keenly resented. One of two methods of procedure is usually followed. A new worker is sent out as one of many to the foreman or departmental head with a card which reads, "Joe Newcomer, hired for machine six," or he is properly introduced to the job and the personnel that surround it. In other words, he is just another "hand," or he is a new member of a dignified organization.

In an increasing number of companies, the proper introduction of new employees to old ones, company policies, social activities, equipment, and the job is becoming an established function of the personnel department. Mutual understanding and a feeling of "at homeness" are cultivated at the start. Under such conditions, the new worker feels more like a human individual than a numerical digit. If the applicant is approved by the company physician, he is told by the interviewer that he has been accepted and is instructed when to report for work. At this time, there may be explained to him such points as the following: character of the personnel; use of hospital, dispensary, and restrooms; lunchroom facilities; length of the working day and rules governing overtime periods; use of the coatroom, locker, washroom, drinking fountain, and similar equipment; entrances and exits; time clocks; time and method of payment; pay office; recreational opportunities; rules governing tardiness, absence, and discipline; rest periods; employees' clubs; mutual-benefit association; bonus or profit-sharing plan; suggestion scheme; transfer and promotional opportunities and rules; educational facilities; medical and safety service; rules governing telephone calls; grounds for discharge; employee representation plan and method of adjusting grievances and complaints; payroll entry place and procedure; and legal and financial help. All this information is usually contained in the employees' handbook or book of rules and instructions which is given to each new worker with the request that he familiarize himself with its contents. After this explanation, the new employee is taken to his department and introduced to his foreman and others who are to have supervision over him; they in turn introduce him to his fellow workers and to his job and its environment.

The methods of introducing new employees vary. This is as it should be, since each organization has its own special conditions and is better off if it develops methods of personnel administration adapted to its peculiar needs. In many establishments, a representative of the personnel office personally introduces the new worker to the supervisor under whom he has been assigned to work, and the supervisor accepts it as a part of his duty to give the man a courteous and genial reception. In some plants, the workman is given a card of introduction to the supervisor or foreman, or, at times, the foreman comes to the personnel office to meet and greet the new man. It is a common practice for the supervisor or his representative personally to introduce the new worker to his job, instructing him as to its peculiar characteristics and actual operations. A special training department is sometimes operated to aid in preparing new employees for their positions.

Follow-up Technique.—The period of first follow-up ranges ordinarily from one day to one month. During this period, whenever possible, a reasonable number of transfers are allowed in an effort to find the right place for each worker, if it has not been possible scientifically to place the worker permanently at the time of hiring. Department stores, telephone companies, and similar organizations, in which large numbers of workers are women, generally use some kind of a sponsor system under which certain individuals are assigned the duty of befriending and aiding new employees. This system is being applied in variously modified forms, such as is offered by the works council or employees' association in other types of industrial organization.

The real follow-up system refers to the way in which the employer looks after and follows up the progress and accomplishments of each worker. In some companies, a definite system of follow-up is in use. After a few weeks of employment, usually at the end of 30 days, the manager of personnel calls for the progress reports and other written records of production, punctuality, and similar items. Sometimes these reports will also include individual ratings, as is the case at Wm. Filene's Sons Company, a form copy of which was reproduced in Fig. 9. At other times, the report is sent in at the end of each 3- or 6-month period of employment and will usually contain information relative to promotion suggestions (see Figs. 17 and 18 following). The Douglas Aircraft Company has a report turned into the personnel office on each employee four times a year, and upon a basis of these recommendations discharges, transfers, and wage increases, as well as promotions are made. The R. H. Macy department store, through a special Personnel Review Committee composed of the assistant general manager, floor superintendent, department manager, employment office interviewer, and the training supervisor, studies the job performance of every Macy employee twice each year. After careful consideration of all available records concerning the individual, this committee makes certain recommendations in reference to salary, position, replacement, additional training, medical follow-up, transfer, or promotion. The management feels this semiannual review is the "fairest way known of rating and compensating employees because it considers all the facts and all the records of the individual's performance."



ANNUAL RATING AND SALARY REVIEW

M____________ Date____________

Name	Store No.	Occupation	Dept.

Each employee is to be rated by his immediate superior. You may make such recommendations for change in salary as you consider justified. Your recommendation requires the final approval of the Store Manager before it becomes effective. You are therefore under no circumstances to promise your subordinates any increase you may recommend.

Date of entrance________Date last increase________ Standard wage for this occupation

Amount last increase $________Present wage $________ "A" $________

"B" $________

Recommended increase $________Effective________ "C" $________

SIGNED____________

APPROVED____________
Head of division or pyramid

Personnel superintendent	Date	Expense dept.	Date

Store manager	Date	Vice-president

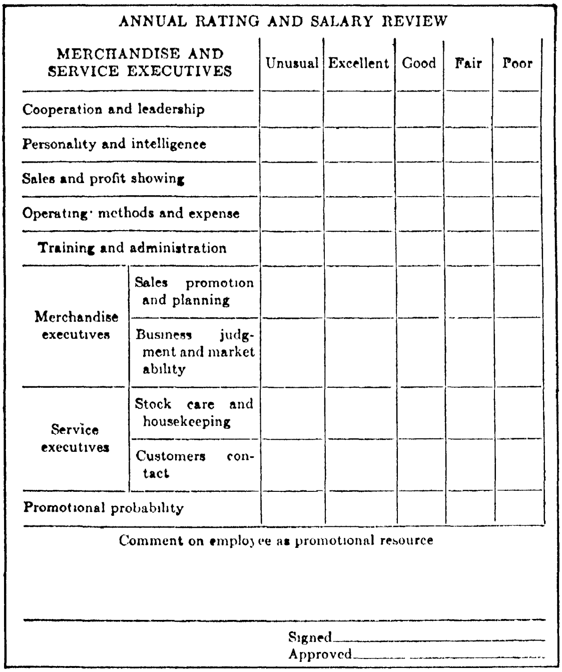
FILL OUT AND RETURN TO EMPLOYMENT OFFICE WITHOUT DELAY

NOTE: When affixing your signature, place the date beside it, as (John Jones 9/12). This will tend to make return of rating prompt.

FIG. 17.—(Obverse.)

With these individual reports and records in mind, the personnel manager usually will either conduct a personal conference with the worker or send to the worker a digest of the company's record of his work with any attached notifications, such as a notice of wage increase. If the worker is sent for, his own record is explained to him, and he has an opportunity to bring up any points concerning the organization which are not clear to him. Also if he chooses, at these conferences he can discuss his job and talk over his complaints or any problems he may be confronting.

Properly administered follow-up is of inestimable value. This is evident from the growing number of business and industrial organizations which are using this technique. A recent survey of 64 companies employing a total of 309,317 workers showed that a third of these concerns accounting for 33 per cent of the workers have definitely formulated follow-up systems and that 44 per cent of them have periodic personnel interviews.[1]



ANNUAL RATING AND SALARY REVIEW

MERCHANDISE AND SERVICE EXECUTIVES		Unusual	Excellent	Good	Fair	Poor
Cooperation and leadership						
Personality and intelligence						
Sales and profit showing						
Operating methods and expense						
Training and administration						
Merchandise executives	Sales promotion and planning					
	Business judgment and market ability					
Service executives	Stock care and housekeeping					
	Customers contact					
Promotional probability						

Comment on employee as promotional resource

Signed____________________

Approved____________________

FIG. 18.—(Reverse.)

It is practically the only effective check on selection and placement and often the main basis for promotion. A man incorrectly placed is invariably discontented and discouraged, with the consequence that he is a source of constant friction, inefficiency, and lost time. Companies having progressive personnel policies make it their business to keep a watchful eye on the progress of a new worker, and upon old ones as well. If the employee is not doing his work efficiently, he is given additional instruction and training. If he is not getting along smoothly with his departmental head, an effort is made to create a more congenial relationship or to effect a transfer. If he displays a lack of capacity for the job or ability far above the requirements of the job, he is transferred to a position more nearly suited to his powers.

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[1] PARKS, DONALD S., "1936 Personnel Trends," *Factory Management and Maintenance*, vol. 94, no. 12, December, 1936, p. 39.

PART IV

THE MAINTENANCE OF PERSONNEL

CHAPTER XIII

LABOR TURNOVER

What Is Labor Turnover?—Throughout the pages of our discussion thus far, repeated reference has been made to the difficulty of maintaining a stable working force. No longer can there be any question as to the importance of proper personnel maintenance. Instability obtains with varying degrees of severity in each movement of the general business cycle. "Labor instability," it has been observed, "is regarded by all those who have given any serious consideration to the problem as one of the maladjustments of our industrial life, wasteful and destructive of the potential man-power of the nation and a serious obstacle to the complete utilization of the country's productive forces."[1]

While there still exists considerable lack of agreement as to just what labor turnover is, it can be defined in general as the influx and exit of individuals into and out of the working force of an organization over a specific period of time. The United States Department of Labor has defined labor turnover as "the replacements in a working force made necessary by employees leaving the service." Generally speaking, this term refers to the total number of employees that are hired during any given period of time in order to maintain the number of employees actually required by the organization. Thus the concept of labor turnover takes into consideration the extent to which separations and accessions take place through causes such as dismissal, layoff, discharge, and voluntary withdrawal; its rate serves as a quantitative measurement of the instability of the working force.

Stabilization of the working force is now regarded by intelligent management everywhere as a primary essential in the efficient operation of all types of organizations. Those who are responsible for the management of labor relations are cognizant of the fact that effective methods of recruiting, selecting, and placing the labor force avail but little in the absence of adequate ways and means of retaining those who have been selected and placed in an organization, often after intensive training periods and at considerable cost.

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[1] BRISSENDEN, P. F., and EMIL FRANKEL, *Labor Turnover in Industry*, p. 1.

A general discussion of the problem of labor instability would necessitate a consideration of the larger phases of the movement of industrial and civil personnel as well as the more restricted phase of labor placement in given organizations. To the larger phases of the movement, the term "labor mobility" is given. It has reference to the whole phenomena involved in the adjustment of the supply of labor to the demand for it, and is of great importance from the point of view of society, as well as from that of the shifting of workers.

From the standpoint of the individual organization, however, the narrower phase of the problem is more vital. This is what has been generally referred to as "labor turnover." As stated above, it means the number of employees who leave or enter the service of an organization during a given period. There are many who insist that the term labor turnover is more correctly used in reference to the *replacements* made necessary by the movement of laborers from one plant to another, or which are required to maintain the present working force. This difference of opinion is analyzed at length below. The general problem of labor mobility is a serious one requiring social control. The narrower problem of labor turnover, on the other hand, is primarily a problem in personnel administration and is largely the concern of the individual employer. It is with the latter problem that we are here concerned.

Undesirability of Complete Stability of the Working Force.—Any discussion of the problem of labor instability must be prefaced with the caution that within certain limits labor mobility may be regarded as one of the phenomena of modern industrial life. A certain amount of shift in the personnel of an establishment must be accepted as normal and necessary, if not indeed inevitable and desirable. Such movements of the labor force will probably continue as long as men and women desire to improve their standard of living by seeking larger incomes, necessarily face the exigencies of Ill-health and death, and are victims of the disturbing ebb and flow of alternating expansion and contraction in industrial and business activity. The desirability of these shifts in the personnel of an organization may not seem so obvious. Yet, there is a consensus of judgment among business executives to the effect that new blood usually has a stimulating influence upon any enterprise and that when employees have been with a company for an extended period they frequently come to regard themselves as possessors of an indefinite tenure of employment, a vested interest in the job, regardless of sustained efficiency. For this reason, it is sometimes desirable, both from the standpoint of the management and of the employees themselves, that workers make a change in their employment relations. The fundamental question in an analysis of the problem of labor instability is, therefore: *What constitutes the maximum of shift in the personnel which may be accepted as most compatible with the best interests of both the employer and the employee and how can this shift be measured?*

Methods of Measuring Labor Turnover.—Many different methods have been developed for the measurement of labor turnover, and considerable controversy has ensued between the exponents of the various methods. The method of measurement invariably depends upon the employment manager's conception and definition of labor turnover. Inasmuch as most of those methods involve complicated computations they have not come into general use. Among the more generally accepted theories are the following:

1. *Basis of Separations.*—Turnover is here considered as the relationship between the total number of separations from the company from all causes during a specified period of time (as month, or year) and the average number employed during this same period of time. Expressed in terms of a simple mathematical formula, its rate is determined as

$$T \text{ (turnover rate)} = \frac{S \text{ (separations)}}{F \text{ (average working force)}}$$

This method of computation was suggested first by the Committee of National Employment Managers Conference at Rochester in 1918, and since then, its general method of computation has been accepted by the majority of organizations at present making labor turnover analyses. A survey of 195 companies recently made[1] disclosed the fact that two-thirds (66 per cent) of all those reporting were using this method for determining the rate of labor turnover. Those who conceive of turnover in terms of separations from service, whether because of resignation, discharge, or layoff, suggest that regardless of the cause the employer suffers a financial loss in the case of every worker who leaves, and from the social point of view every separation entails the possibility of loss of earning power and morale.

2. *Basis of Replacements.*—Here the turnover rate is defined as the relationship between the actual number of replacements on the working force during a given period of time and the average number

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[1] SCOTT, WALTER D., ROBERT C. CLOTHIER, and S. B. MATHEWSON, *Personnel Management*, p. 457.

employed during this same period. Expressed mathematically, it is determined as

$$T \text{ (turnover rate)} = \frac{R \text{ (replacements)}}{F \text{ (average working force)}}$$

Labor turnover is thus regarded as comprising the total number of employees hired during a given period to replace those who have terminated their employment relation or whose services have been terminated by the management. This method of computation was first suggested by Prof. Paul Douglas in 1919.[1] It is based upon the theory that from a business standpoint separations which are not *replaced* cost nothing, and if unavoidable, even accrue to economic advantage.

3. *Basis of Distinction between "Avoidable" and "Unavoidable" Separations.*—Some employment managers have insisted that these simple formulas do not tell the whole story and are therefore inadequate. In support of their contention, they point out that frequently a large number of the total separations for any given period are not attributable to any fault of the employer or to any internal conditions of the plant or industry. As already stated, a certain amount of turnover is inevitable. Sickness, old age, death, family conditions, interdepartmental transfers, and seasonal and cyclical fluctuations in business necessarily contribute to the percentage of separations. These conditions, it is contended, are beyond control of the employer. Therefore, separations should be classified into "avoidables," and "unavoidables." The formula would read as follows:[2]

$$T = \frac{S - (M + U)}{F}$$

Where T = labor turnover
F = average working force
S = total separations
M = interdepartmental transfers
U = unavoidable separations

Or, if transfers are eliminated from consideration:

$$T = \frac{S - U}{F}$$

It is doubtful whether in actual practice there is much to be gained from the classification of separations into "avoidables" and "unavoidables." The experience of American industries indicates that such a classification is at best quite arbitrary and consequently unsatisfactory, if not misleading. By artful interpretation or manipulation of data, any firm can classify separations according to its needs or the wishes of its own conscience. Moreover, it is extremely difficult to separate "avoidable" from "unavoidable" terminations. When are discharges avoidable or unavoidable? In some cases, discharges are plainly unavoidable, but in most cases it would not be difficult to prove either that they are avoidable or unavoidable, depending upon whether the matter is viewed from the employer's standpoint or from that of the worker. Certain firms regard all discharges as unavoidable. They may, however, be regarded as avoidable, resulting from deficiencies in personnel policies, such as poor methods of recruitment, selection, and placement; inadequate training facilities; the absence of sufficient transfer and promotional opportunities; and unintelligent administration of human relations. A certain percentage of separations may in periods of business recession be classified as "unavoidable," yet, it is apparent from experiences of certain concerns that scientific control of production makes a considerable percentage of such separations "avoidable." Again, sickness and ill health are classified by some companies among the "unavoidables," but they are avoidable at least to the extent that sanitary conditions of employment, periodical medical examinations, first aid, medical service, safety education, and education in personal hygiene are applied to reduce such separations to a minimum.

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[1] DOUGLAS, PAUL H., *Bulletin of Taylor Society*, August, 1919.

[2] First suggested by Daniel Bloomfield in *Industrial Management*, August, 1919.

Looked at strictly from the standpoint of the employer, labor turnover is always identical with labor maintenance by replacement. Separations and hirings do not make allowance for the expansion and contraction of industry and business. In periods of industrial expansion, the aggregate working force is increased, and, in periods of business depression, the working force must be reduced. It is urged that these are conditions over which the employer can exercise little or no control, and to this end other methods of computation have been devised.[1] On the other hand, the method of measuring labor turnover in terms of separations not only reflects something of the significance of the changes in personnel to the employer but also suggests the losses entailed for the employee and society. That is, separations present a general picture of the whole problem.

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[1] See, for instance, the method of computing labor turnover as first recommended by Boris Emmet in "Turnover of Labor," *Bulletin of the Federal Board of Vocational Education*, November, 1919.

From our own point of view, it would seem that the method of measurement is far less important than an accurate analysis of responsible factors and that any of the above methods is satisfactory, provided the accompanying analysis is sufficiently adequate and accurate to indicate causative conditions and point out an approach to workable solutions. If we assume that such an analysis will be made, our preference is for computation on the basis of separations.

Labor Turnover Computations of the Department of Labor.—Each employer may choose his own individual method of computing labor turnover, but his data will be of little value to him in making intelligent analyses unless in their computation procedures have been used which will permit the comparison of his own turnover experiences with those of other companies and industries. In this respect, the United States Bureau of Labor Statistics has been doing signal service in its attempt to standardize the procedure for computing labor turnover, thus making analysis of comparable data both possible and profitable.

To this end the bureau publishes in its *Monthly Labor Review* data on labor turnover covering over 5,000 manufacturing establishments, representing 144 different lines of manufacture and employing over 2,000,000 workers.[1] Each month, in answer to questionnaires, the bureau receives information on the following:

1. Number of separations during the period (previous month).
    - *a.* Number of quits (that is, termination of employment, usually initiated by worker because of desire to leave, but at times due to his physical incapacity).
    - *b.* Number of discharges (that is, work termination at will of employer because of some fault on part of worker).
    - *c.* Number of layoffs (that is, termination of employment at will of employer without prejudice to worker. Short definite layoff with worker's name left on payroll is not counted as separation).
    - *d.* Total separations (termination of employment of any of the three kinds: quits, discharges, and layoffs).
2. Number of accessions during period (that is, number of new employees hired or old employees rehired).
3. Number of factory workers on payroll (these data obtained to allow computation of the average number on payroll).
    - *a.* At beginning of period.
    - *b.* At end of period.

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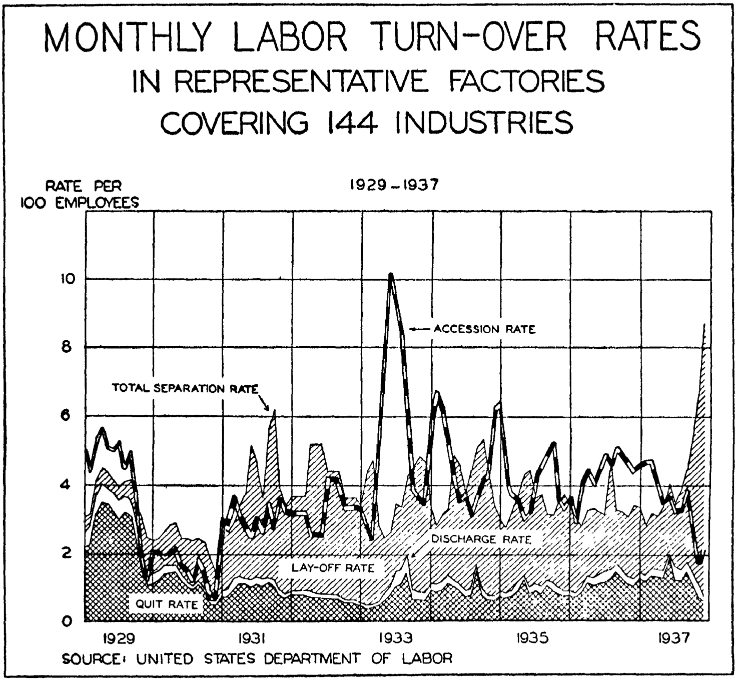
[1] See "Standard Procedure for Computing Labor Turnover," *United States Bureau of Labor Statistics, Bulletin* 616, *Handbook of Labor Statistics,* 1936 ed., pp. 801–811.

From these data, the items of separation and accession are divided by the average payroll in computing the rate of various phases of turnover per 100 employees for the month. The general rates are always computed from the grand total. All turnover rates are "weighted" according to the size of establishment, as measured by the number of employees. If an equivalent annual rate is desired, the monthly rates are multiplied by fractions approximating twelve units, depending upon the number of days in the month in question (multiply by 11.77, if 31-day month; 12.17, if 30-day month; 13.04, if 28-day month, etc.). Separate computations are made showing monthly separation and accession rates for the automobile, boot and shoe, brick, cotton, foundries and machine shop, furniture, iron and steel, men's clothing, sawmill, and slaughtering industries. Thus, personnel departments of individual establishments within these ten industries are greatly aided in their analysis of labor turnover by information available through the Department of Labor in Washington. The above chart presents the bureau's

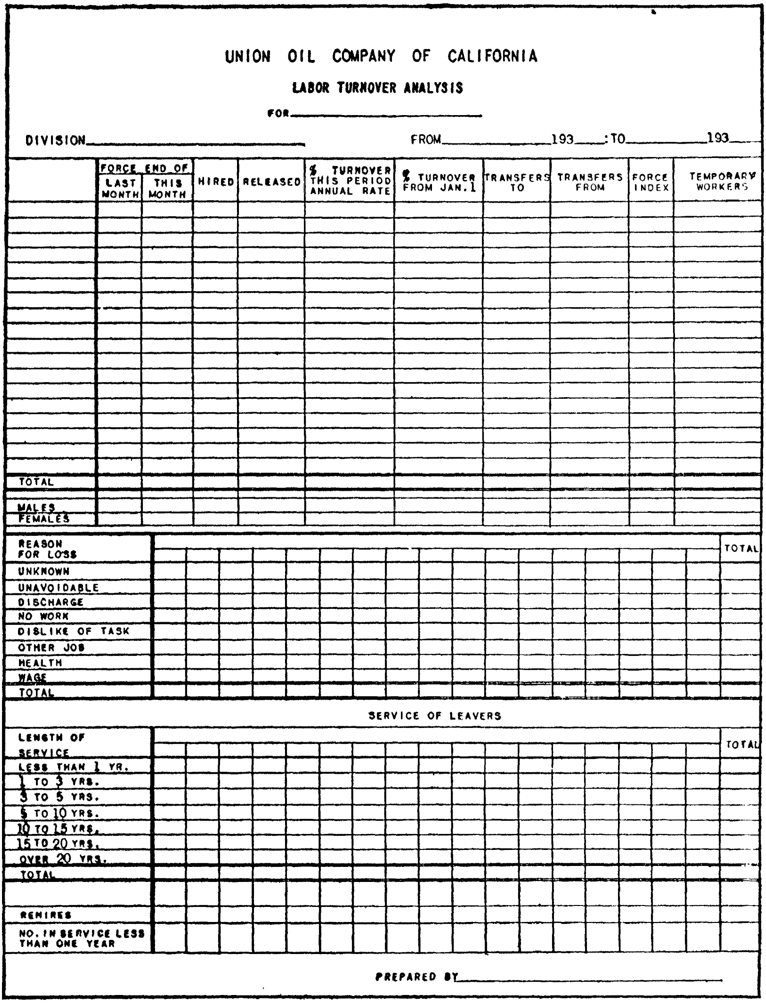

MONTHLY LABOR TURN-OVER RATES
IN REPRESENTATIVE FACTORIES
COVERING 144 INDUSTRIES

SOURCE: UNITED STATES DEPARTMENT OF LABOR

Fig. 19.

labor turnover rates per 100 employees in representative American factories between 1929 and 1937.

Turnover Records and Their Analysis.—The first step in an analysis of labor turnover is the establishment and maintenance of adequate turnover records. Figures 20 and 21 present forms illustrative of the types of analyses being carried on today. Specific instructions are issued with each copy of the form in order that



UNION OIL COMPANY OF CALIFORNIA

LABOR TURNOVER ANALYSIS

FOR____________________

DIVISION____________________ FROM__________193____: TO__________193____

	FORCE END OF		HIRED	RELEASED	% TURNOVER THIS PERIOD ANNUAL RATE	% TURNOVER FROM JAN. 1	TRANSFERS TO	TRANSFERS FROM	FORCE INDEX	TEMPORARY WORKERS
	LAST MONTH	THIS MONTH								
TOTAL										
MALES										
FEMALES										

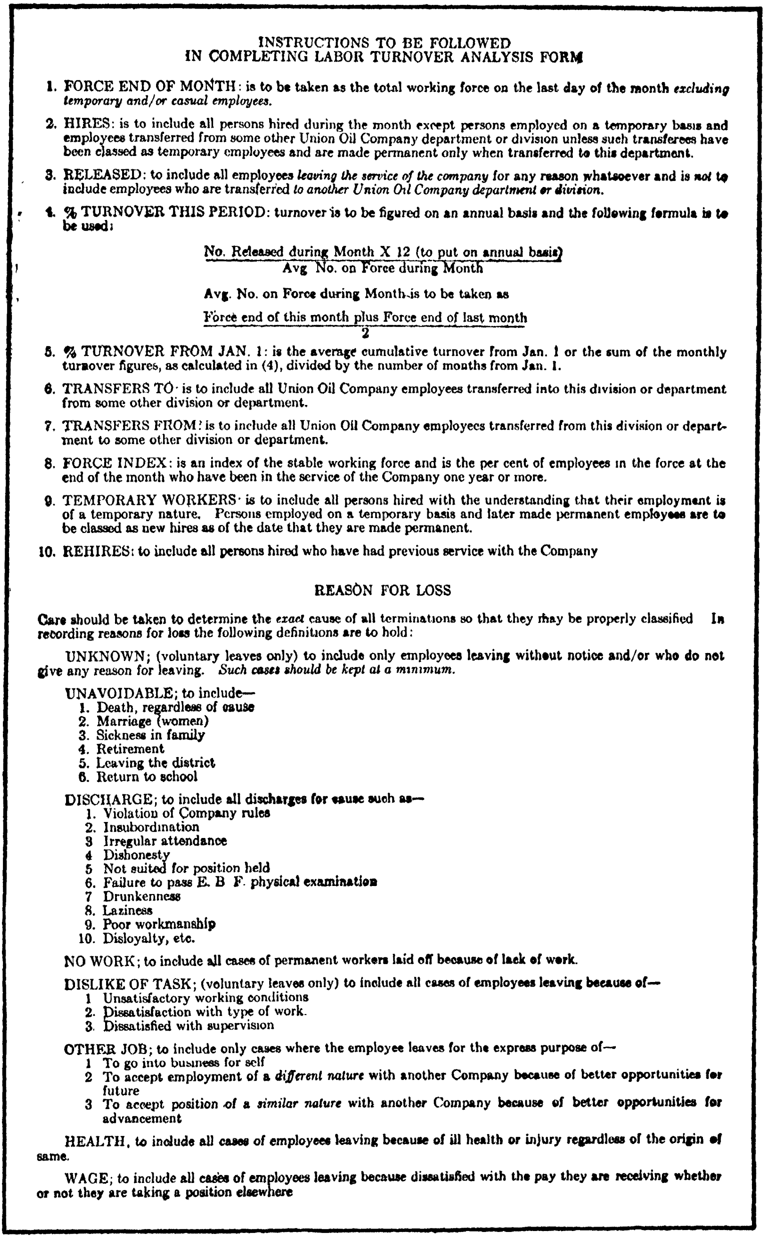
REASON FOR LOSS	TOTAL
UNKNOWN	
UNAVOIDABLE	
DISCHARGE	
NO WORK	
DISLIKE OF TASK	
OTHER JOB	
HEALTH	
WAGE	
TOTAL	

SERVICE OF LEAVERS

LENGTH OF SERVICE	TOTAL
LESS THAN 1 YR.	
1 TO 3 YRS.	
3 TO 5 YRS.	
5 TO 10 YRS.	
10 TO 15 YRS.	
15 TO 20 YRS.	
OVER 20 YRS.	
TOTAL	
REHIRES	
NO. IN SERVICE LESS THAN ONE YEAR	

PREPARED BY____________________

FIG. 20.



INSTRUCTIONS TO BE FOLLOWED
IN COMPLETING LABOR TURNOVER ANALYSIS FORM

1. FORCE END OF MONTH: is to be taken as the total working force on the last day of the month *excluding temporary and/or casual employees.*
2. HIRES: is to include all persons hired during the month except persons employed on a temporary basis and employees transferred from some other Union Oil Company department or division unless such transferees have been classed as temporary employees and are made permanent only when transferred to this department.
3. RELEASED: to include all employees *leaving the service of the company* for any reason whatsoever and is *not* to include employees who are transferred *to another Union Oil Company department or division.*
4. % TURNOVER THIS PERIOD: turnover is to be figured on an annual basis and the following formula is to be used:

$$\frac{\text{No. Released during Month X 12 (to put on annual basis)}}{\text{Avg No. on Force during Month}}$$

Avg. No. on Force during Month is to be taken as

$$\frac{\text{Force end of this month plus Force end of last month}}{2}$$

5. % TURNOVER FROM JAN. 1: is the average cumulative turnover from Jan. 1 or the sum of the monthly turnover figures, as calculated in (4), divided by the number of months from Jan. 1.
6. TRANSFERS TO: is to include all Union Oil Company employees transferred into this division or department from some other division or department.
7. TRANSFERS FROM: is to include all Union Oil Company employees transferred from this division or department to some other division or department.
8. FORCE INDEX: is an index of the stable working force and is the per cent of employees in the force at the end of the month who have been in the service of the Company one year or more.
9. TEMPORARY WORKERS: is to include all persons hired with the understanding that their employment is of a temporary nature. Persons employed on a temporary basis and later made permanent employees are to be classed as new hires as of the date that they are made permanent.
10. REHIRES: to include all persons hired who have had previous service with the Company

REASON FOR LOSS

Care should be taken to determine the *exact* cause of all terminations so that they may be properly classified In recording reasons for loss the following definitions are to hold:

UNKNOWN; (voluntary leaves only) to include only employees leaving without notice and/or who do not give any reason for leaving. *Such cases should be kept at a minimum.*

UNAVOIDABLE; to include—
1. Death, regardless of cause
2. Marriage (women)
3. Sickness in family
4. Retirement
5. Leaving the district
6. Return to school

DISCHARGE; to include all discharges for cause such as—
1. Violation of Company rules
2. Insubordination
3. Irregular attendance
4. Dishonesty
5. Not suited for position held
6. Failure to pass E. B F. physical examination
7. Drunkenness
8. Laziness
9. Poor workmanship
10. Disloyalty, etc.

NO WORK; to include all cases of permanent workers laid off because of lack of work.

DISLIKE OF TASK; (voluntary leaves only) to include all cases of employees leaving because of—
1. Unsatisfactory working conditions
2. Dissatisfaction with type of work.
3. Dissatisfied with supervision

OTHER JOB; to include only cases where the employee leaves for the express purpose of—
1. To go into business for self
2. To accept employment of a *different nature* with another Company because of better opportunities for future
3. To accept position of a *similar nature* with another Company because of better opportunities for advancement

HEALTH, to include all cases of employees leaving because of ill health or injury regardless of the origin of same.

WAGE; to include all cases of employees leaving because dissatisfied with the pay they are receiving whether or not they are taking a position elsewhere

FIG. 21.

strict uniformity can be gained in classification and statistical computation. Instructions for filling in the form cover such points as definition of the working force at end of month, hires, and releases; a computation of the percentage of turnover; the method of determining transfers to and from the company; the force index; number of temporary workers; and rehires. The reverse side of the form allows for a presentation of a detailed analysis of separations from the company; it follows the classification of a cause pattern suggested by the Bureau of Labor Statistics, except for certain modifications, which quite obviously are advantageous to individual organizations and depend largely upon size and type of activity. These points of information are covered in detail in Fig. 21.

The extent to which these or similar records are being used today throughout the country in an attempt to diagnose intelligently the reasons for constant labor turnover is revealed in a study conducted by the Bureau of Labor Statistics.[1] A total of 224

TABLE 4.—NUMBER OF ESTABLISHMENTS RECORDING REASONS FOR SEPARATION AND NUMBER OF ESTABLISHMENTS ATTEMPTING TO ADJUST DIFFICULTIES AND RETAIN EMPLOYEES[1]

Industry	Number of establishments				
	Recording reasons for leaving	Not recording reasons for leaving	Making an attempt to adjust difficulties	Not making an attempt to adjust difficulties	Total
Automobiles and parts	10	1	10	1	11
Clothing	7	6	9	4	13
Food products	17	6	18	5	23
Iron and steel and their products	42	3	42	3	45
Lumber and its products	13	7	11	9	20
Miscellaneous	30	11	35	6	41
Petroleum refining	9	0	8	1	9
Boots and shoes	10	5	9	6	15
Textiles—North	14	5	15	4	19
Textiles—South	14	14	10	18	28
Total	166	58	167	57	224
Percentage of total	74.1	25.9	74.6	25.4	100.0

[1] SOURCE: United States Department of Labor.

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[1] United States Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review*, vol. 35, November, 1932, pp. 1005–1015.

establishments representing 30 industries and employing 387,826 workers were visited during the course of the investigation. Results showed that 166, or 74.1 per cent, of these companies maintained some sort of an interview with the employee upon leaving, and obtained from him, if possible, his account of the severance of employment relations. As Table 4 further shows, however, a fourth (58) of the 224 establishments made no attempt either through labor turnover sheets or other forms to keep a record of the reasons for leaving.

Percentages of labor turnover have little practical value unless based upon adequate, reliable records uniformly filled in and accompanied by careful critical analysis. It is not sufficient to know what the percentage is, or even that the employee was discharged for dishonesty. The management must know the reasons for the turnover rate since a knowledge of the relative importance of contributing factors in employee separations can be of great value in formulating labor policies. Thus the percentages must be analyzed with regard to the importance of voluntary quits, discharges, and layoffs. An even more minute analysis can be made if adequate records are available. Turnover by departments may be examined critically by determining turnover rates for each department in the organization, and by presenting the reasons for the terminations. In this way it is quite possible to discover those departments of the organization in which turnover is excessive, and to establish a correlation between their percentages and causative conditions. This has frequently proved helpful in eliminating causes of chronic turnover in departments where disagreeable conditions of employment, either physical or personal, prevailed. Such procedure is useful in segregating a major cause of separation, such as length of service, mentality, sex, age, training, type of work, and nationality from many other factors of less importance, thus making possible the establishment of corrective or preventive devices. In a recent analysis of labor turnover of a large public utility company, the six major departments of the organization showed remarkably different rates. Careful analysis of these data finally revealed that the heavy turnover rate was attributable to a relatively small number of new employees who came into the company to stay for only a very short period. This was evident from the complete analysis which established the fact that the rate for those with 1 year or more of service was 14 per cent and that of employees with one month of service was 1,062 per cent.[1]

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[1] Scott, Clothier, and Mathewson, *op. cit.*, p. 468.

TABLE 5.—LABOR TURNOVER IN SIX MAJOR DEPARTMENTS IN A PUBLIC UTILITY COMPANY[1]

Department number	Average number employees	Number exits in 3 months	Annual turnover rate
1	302	50	66
2	242	60	99
3	110	29	105
4	73	22	120
5	200	91	182
6	478	406	338
Total..........	1,405	658	187

[1] SCOTT, CLOTHIER, and MATHEWSON, *op. cit.*, p. 467.

Such situations demonstrate that immediate steps need to be taken to curb the weaknesses of selection and placement. Similar analyses may be made of the relative importance of occupations, age, sex, education, and other characteristics. Control of the problem is inconceivable without such detailed analysis.

Extent and Cost of Labor Turnover.—Although an increasing amount of information is being accumulated indicating the extent and cost of labor turnover, adequate statistical evidence is still lacking. A sufficient number of studies have been made recently to demonstrate that labor turnover is a significant factor in overhead and operating expense throughout all types of organizations. As suggested above, the rate varies considerably with the changes in business conditions, tending to drop to a low level in periods of business depression and to rise to a high level in times of expansion. In periods of recession, such as 1907–1908, 1913–1914, 1921–1922, and 1930–1934, the rate of labor turnover even in establishments which normally experience considerable difficulty in maintaining a stabilized working force falls to 50 per cent or below. During normal business years a labor turnover of 300 per cent or more is common in some industries and organizations. In years of abnormal industrial and business activity, the rate of labor turnover has tended to climb to excessive levels, a rate of 500 to 1,000 per cent being experienced during the expansion period of the World War.

Management is realizing that high labor turnover is extremely costly, and is bending every effort possible to curtail this waste. Reference to Fig. 19 will show the net results of the efforts of over 5,000 representative manufacturing firms. These companies, employing a total of over 2,450,000 workers in December, 1937, experienced total annual separation rates of 45, 29, 48, 51, 45, 49, 43, 40, and 53 per cent respectively between the years 1929 and 1937 inclusive. During these same years these companies added an average of between 19 and 63 men for every 100 men employed.

Turnover also varies with the type of enterprise and industry. In all the years that the Bureau of Labor Statistics has been computing rates, except in 1933, the iron and steel industry has shown both the lowest separation and lowest accession rates of any of the ten groups of industries covered (automobiles, boots and shoes, bricks, cotton, foundries, furniture, iron and steel, men's clothing, sawmills, and slaughtering and meat packing). In five of these industries hiring and separation rates exceeded 50 per cent each year between 1931 and 1935.[1] In other words, during each year in this 5-year period, in five of the major industries in the United States 50 or more workers were separated out of each 100 employed and 50 more were added either as rehires or as new employees.[2]

Further reports covering the last months of 1936[3] show that variations in employment during these months have been much greater in automobile and body manufacturing plants than in plants manufacturing automobile parts and equipment. These records show that 33 workers out of each 100 employed in the automobile plants were separated from the payrolls during the last 2 months of the year (1936), while only 8 out of each 100 were dropped from the payrolls of equipment plants. This large drop in automobile workers, most of which did not represent a permanent layoff, was doubtless due to the interruption caused by a change in car models. On the other hand, some well-established and financially strong organizations have remarkably low turnover rates. The Standard Oil Company of California, for instance, had 12,423 employees in the parent company at the end of 1936. Of the total, 7,946, or 64 per cent, had 10 years or more of continuous service; 3,189 of these had been with the company for 10 years, 2,840 for 15 years, 1,298 for 20 years, 442 for 25 years, 148 for 30 years, 22 for 35 years, and 7 for 40 years.[4]

The total cost of this constant change in personnel is beyond all computation, yet it is none the less real to each employer, employee, and to society as a whole. Losses to employers are perhaps the most obvious. Every employee who is recruited, selected, and placed by a business establishment represents a financial outlay, including the expense of hiring, instructing, training, and breaking him in. Following is an estimate of loss experienced by a boiler manufacturing company each time a worker leaves the company's employment:[1]

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[1] Department of Labor, *Bulletin* 616, 1936, p. 806.

[2] *Ibid.*

[3] *Monthly Labor Review*, vol. 43, December, 1936, p. 1483.

[4] HELD, W. J., "Why I Like to Work for My Company," *Forbes Magazine Reprint*, Standard Oil Company of California, 1937.

Loss in production between decision to quit and actually quitting	$10.00
Loss of production between time former employee left and new employee starts	48.00
Employment office salary cost—handling leaving transactions	1.87
Employment office salary cost—hiring new employee	3.75
Medical division cost, physical examination	1.10
Pay roll and accounts salary cost, leavers and replacements	5.00
Shop office salary cost, leavers and replacements	2.00
Supplies cost, stationery, photographs etc., for new employees	0.50
Loss in production, spoilage by new employee	10.00
Loss of material, spoilage by new employee	5.00
Extra supervision required, floor space, equipment, etc., required to bring employee to point of standard production	7.00
Rent, light, heat, office of employment department	1.00
Medical division cost, frequency of accidents among new employees above normal	0.25
Total	$95.47

Every change that occurs in the personnel of an organization entails a financial loss. "This constant flux and change in organization represents a tremendous hindrance to production and profits. It signifies a heavy investment, rather expense, for unproductive effort. It is an outgo that bears little or no relation to output."[2] If we assume the average turnover rate to be the very low figure of 25 per cent among over 32,000,000 gainfully employed in the manufacturing, transportation, trade, personal service, and clerical occupational classifications alone (as presented by the 1930 federal census), some 8,000,000 workers are changing their employment on the average of once each year. If the turnover of these workers involves a nominal loss to their respective employers of only $10 each, the loss to employers alone would be approximately $80,000,000 annually,

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[1] Chamber of Commerce of the United States, Department of Manufacture, *Balancing Production and Employment through Management Control*, March, 1930; cited by J. E. Walters, in *Applied Personnel Administration*, p. 221.

[2] "Training Service," *United States Department of Labor*, *Bulletin* 5, 1919, p. 5.

If the cost averages $50, $400,000,000 each year is represented; at $100 per worker, the employer cost would be roughly estimated at $800,000,000. Labor turnover among some unskilled occupations has been estimated to average approximately $50 per worker. In instances where intensive training periods are required, or where the nature of the work makes the breaking in of new employees very expensive,[1] the aggregate cost is indeed very high. The present annual cost of labor turnover to employers in the United States may be estimated conservatively at approximately $500,000,000. In addition there are the tremendous losses sustained by the workers themselves in wages and by the public through decreased productivity, which means a correspondingly lower total national income.

The principal financial losses incurred by the employer through labor turnover are suggested above in the list of items of turnover cost taken from a boiler manufacturing company. It follows that the cost of labor turnover per man to the employer will vary with the amount of previous training, the degree of skill required in the job and acquired by the worker, and the natural aptitude and adaptability of the employee. The experience of a large number of firms indicates a cost of from $30 to $100, depending upon numerous factors, such as the complexity of the operation; the degree of standardization; the nature of materials and equipment used; and the skill, experience, and intelligence of the new worker. In the shoe industry, for example, the cost of training an inexperienced man for cutting upper leather in a well-managed shop has been set at $576; for a semiexperienced man, $450. To install an experienced man in a different factory costs $50.[2]

It is a recognized fact that new workers who are more or less unfamiliar with the processes and operations peculiar to a given plant or office contribute greatly to the increased outlay because of damaged materials, spoiled work and breakage of machines, tools, and equipment. On account of this same unfamiliarity new workers tend to be less efficient than old ones and to slow up production. Moreover, labor turnover tends to breed inefficiency, and the new accessions to the labor force may include a considerable number whose skill and competency have been depreciated through habitual turnover. Finally, statistical studies of the frequency and causes of industrial accidents have proved conclusively that the accident frequency rate tends to be excessively high among new employees, being especially pronounced during the first few months of employment.

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[1] Chamber of Commerce of the United States, The Department of Manufacture, *Making Labor Turnover Records Comparable*, 1929, p. 2.

[2] Federated American Engineering Societies, Committee on Elimination of Waste, *Waste in Industry*, p. 14.

Although less tangible, the costs which labor turnover entails for the wage earner and society are intimately related to the costs which accrue to the employer. The costs to the individual employee and society are difficult to measure in terms of dollars and cents, but they are real, comprising chiefly economic and social demoralization of the worker, with the resultant dependence upon private or public charity. That the morale of the working force of the nation is greatly lowered through excessive labor turnover can scarcely be questioned. Some writers on the subject have found consolation in the fact that in most factories at least two-thirds of the working force "is relatively stable and that the rate of turnover is least among the skilled and higher grades of semiskilled labor, whose impairment of morale would do the most injury."[1] But it may be appropriate to suggest that there is little consolation in this fact for the unskilled workers, upon whom rests the incidence of unemployment due to labor turnover, and who, both by virtue of this fact and another, namely, that their share in the dividend of industry is smallest, are the least able to bear the burden and must fall back upon society for financial relief.

Common laborers, lower grades of semiskilled workers, boys and girls, wage-earning mothers, and the physically and mentally incapable are the first to feel the two-edged sword of discharge and layoff. Among these dependent workers labor turnover tends to breed more labor turnover, and escape from the vicious circle is difficult. Frequent loss of employment and the inability to find new jobs conduce to irrepressible discouragement, continued idleness, and the cultivation of laziness and indifference. The unemployed worker suffers through loss of income during the interval between jobs, frequently must incur the expense of traveling to another community in search of employment, pay a fee to some exploitative private employment agency, and face the normal penalties of idleness. Almost invariably, idleness results in loss of skill, efficiency, and ambition, which further complicates the difficulty by making it almost impossible for the workers to find employment. The normal consequence is that such individuals become economically and morally deficient, tending to join the already too large army of casual laborers. Or else they swell the ranks of the professional migratory laborers who live a parasitic existence in auto-trailer or transient camps. For their subsistence, they depend upon the charitable members of organized society or the tax-supported funds of local governments. Sometimes, they take advantage of temporary inducements, in the form of high wages, which are periodically offered by certain industries in times of great industrial activity.

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[1] "Labor Turnover, Its Cost to Employer and Employee," Council of National Defense, Section of Industrial Service, *Mimeographed Report*, January, 1918, p. 3.

Even when such workers succeed in finding new employment and are rescued from unpleasant consequences of unemployment, the losses they sustain are considerable. These arise from the impairment of skill in the occupation to which they are accustomed and from the necessity of accepting employment in trades or occupations which are foreign to them. Strange occupations, moreover, mean a reduction in earnings during the period of adaptation or training; a probable increase in accident risk resulting from unfamiliarity with new equipment, machinery, and processes; and the danger of discharge for incompetence. Work is often found in a distant community, thus involving expense in moving the family and household effects. In all cases, when labor turnover results in unemployment for an extended period, there develops the necessity of the wife and children going into industry to provide the means of subsistence, the depletion of whatever savings have been accumulated during the period of steady income, the accumulation of debts, the resort to boarders and lodgers whose presence destroys the privacy of the home.

Causes of Labor Turnover.—If an intelligent solution of the problem of labor turnover in a given industry, individual establishment, or a single department of an establishment is to be forthcoming, it will be necessary to make a careful analysis of the underlying causes of each of the constituent factors—resignations, layoffs, and discharges. Merely to discover the relative importance of each in the total volume of terminations will yield no basis for an intelligent approach to the reduction of labor turnover, unless there is an attempt to discover also the reasons for voluntary quits, layoffs, and discharges.

Elsewhere, the causes of labor turnover have been classified as personal, industrial, and social.[1] The personal causes were divided into physiological and psychological conditions, the former including such items as illness and death, and the latter such items as wanderlust, bad disposition, family ties, and desire for improvement of the standard of living. The industrial causes comprised two groups. In the first were deficiencies in personnel procedure, such as poor methods of recruitment, selection, and placement, the absence of adequate financial and nonfinancial incentives; unfavorable conditions of employment, unregulated production, autocratic management, and lack of training facilities. The second group of industrial causes consisted of general business conditions, including changing demands of the consumer, general inequality of wage scales, and the business cycle. The social conditions comprised such factors as lack of transportation facilities, inadequate means of communication, inadequate housing, and the absence of recreational facilities. In an analysis of labor turnover as a general economic and social problem approached chiefly from the point of view of the wage earner and of society, such a classification of causes would appear to be an appropriate one.

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[1] WATKINS, GORDON S., *Introduction to the Study of Labor Problems*, p. 254. Also see the National Industrial Conference Board's Study on Lay-off and Its Prevention, 1930, by Magnus W. Alexander, pp. 10, 38.

In approaching the problem chiefly from the point of view of the employer, however, it seems best to relate the causes directly to each of the constituent factors—voluntary quits, layoffs, and discharges. Such a classification will better serve management in discovering the conditions contributing to each item in separations, and so facilitate the right kind of readjustment in administrative and executive policies. The following classification, therefore, suggests itself:

- Resignations or voluntary quits:
    - Unsatisfactory wages.
    - Unfavorable physical conditions of employment.
    - Dissatisfaction with the job.
    - Dissatisfaction with the hours of work.
    - Unfavorable labor policies.
    - Desire to take advantage of more attractive positions elsewhere.
    - Family reasons.
    - Undesirable community conditions.
    - Physical conditions, such as sickness, disability, old age, or death.
    - Personal reasons.
    - No verifiable explanation.
- Layoffs:
    - General business conditions, such as market fluctuations, caused by recessions and depressions.
    - Particular business conditions, such as lack of materials, orders, breakdowns, technological changes, change in product, and reorganization.
- Discharges:
    - Physical and economic incapacity and deficiency.
    - Violation of shop rules and regulations.
    - Dishonesty.
    - Incompetency.

Conditions Responsible for Voluntary Separations.—Dissatisfaction with wages, conditions, and hours of employment is a prominent reason for termination of service. The day or piece rate often proves unsatisfactory, or the worker does not like the time and method of payment. Sometimes mistakes are made in the amount of wages due the worker and a proper adjustment is not forthcoming. What may be termed the "working environment" is not infrequently the cause of separations. The factory may be poorly lighted or the light may be badly distributed, the industry itself may be very dangerous, unhealthful and unsanitary conditions of employment may prevail, unpleasant odors may be present on account of the peculiar nature of the processes, and washroom and lavatory facilities may be inadequate or unkept. In many businesses, the hours of labor are still excessively long, night shifts, and Sunday and holiday work are still common, shifts are inconvenient, the 7-day week may prevail, overtime may be excessive and rates too low, and considerable lost time may be incurred because of the nature of the industry. In certain types of employment, such as that offered by domestic service, turnover rates are exceptionally high because of the effect of a combination of these factors. One investigation, for instance, has shown that out of every 100 workers, although rated "satisfactory" by the employer, 33 quit jobs and 21 more were laid off within the first 6 months of employment. Of all placed, including both ratings, 34 per cent quit, and 27 per cent were laid off.[1]

The job itself is often the cause of termination. The worker may find it too hard, comprising the constant lifting of heavy materials or the manipulation of heavy machinery. The work may be excessively routine and fatiguing, involving undue strain upon the nerves, eyes, and attention. The job may be dangerous, noisy, dirty, oily, wet, or smoky. A great many workers find it disagreeable and unhealthful to work inside when extremes of temperature and humidity prevail, or outside where they are unprotected from inclement weather conditions.

In a large number of cases, employees become dissatisfied with the personnel policies of the company. Autocratic methods of labor administration may prevail. The "old man" may be "hard-boiled," or the foreman may be arbitrarily and childishly partisan, displaying favoritism for particular individuals. Requests for transfers may be refused, and promotional opportunities may be very limited. Frequently, the company is too shortsighted to provide for an annual vacation, and workers leave its service in order to enjoy a respite from exacting labor. In one shop, a personal investigation revealed a large number of employees who had not had a vacation in 10 to 20 years. The company had made no provision for annual vacations, and the workers were not financially able to "steal" one and seek employment elsewhere. Frequently, of course, labor troubles, strikes, and lockouts result in a large number of permanent separations.

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[1] Crafts, M. E., "Placement Follow-up of Women," *Personnel Journal*, vol. 11, February, 1933, p. 325.

Of great importance among the reasons for employment terminations is the desire on the part of employees to avail themselves of more attractive opportunities elsewhere, where the rate of pay is higher, hours and conditions of employment are more satisfactory, a friendly attitude toward organized labor prevails, promotional opportunities are greater, or there is a chance to learn a trade. Sometimes workers leave to go into business for themselves.

Family circumstances and community conditions are responsible for a considerable number of resignations. The family may be moving because of inadequate or unsatisfactory housing; religious or educational facilities; excessive distance between the home and the factory and the absence of transportation facilities; sickness and the necessity of seeking more favorable climatic conditions; or the inability to cultivate acquaintanceships and friendships in a new community.

Physical reasons account for a considerable number of terminations through resignation. Ill health, resulting from conditions of employment or from factors external to the place of work, often causes employees to leave the service of a company. Similarly, separations arise from injuries received in the course of employment or outside of work and from death. Married women whose economic circumstances force them to work in factories or mercantile establishments are often compelled to give up their employment because of pregnancy or sheer fatigue resulting from the double burden of factory labor and home duties. A study of labor turnover in cotton mills disclosed the fact that physical conditions were responsible for about 71 per cent of all separations of women from the mills.[1] Finally, old age, with the accompanying desire to live the balance of life on the meager pension provided by the company or the state, terminates the employment relations of many old and faithful workers.

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[1] "Lost Time and Labor Turnover in Cotton Mills," *United States Women's Bureau, Bulletin* 52, 1926, p. 18.

While practically all reasons for employment separations may be looked upon as personal, the term is used here in reference to a limited number of items such as wanderlust, a desire to continue or complete an educational course, removal from the city or the country, temperamental peculiarities, and marriage. Many workers are habitually migratory and restless, possessing an almost insatiable desire to roam. These persons make up the interesting but frequently pathetic group of individuals known in America as "casuals" and "hobos." They work for a few days, weeks, or months; then, either because the jobs they have are temporary or because the old spirit of wanderlust overpowers them, they journey on to some indefinite destination. Akin to this group are the large numbers of youthful workers whose natural instability, accounted for largely by the physiological changes incident to adolescence, figures so greatly in the statistics of labor turnover. Then there are those ambitious employees who have worked to save a sufficient surplus to enable them to complete a technical or cultural education, and who each autumn swell the ranks of those who leave industry and business establishments to return to high school or college. Each month of the year finds a goodly number of immigrants leaving industry for a more or less indefinite visit to the old country, and many individuals leaving one community for some other in the United States. Finally, especially among women employees, marriage is a responsible factor in terminations of employment.

Large numbers of voluntary quits, of course, cannot be accounted for by any reason whatsoever, since new employees come into a plant, work for a few weeks, then leave without giving any reason for their termination of employment, and the management is unable to discover any cause.

Some Reasons for Layoffs.—The reasons for termination of employment through layoffs have already been suggested in the discussion of the relative responsibility of the constituent factors. It will be recalled that layoffs are extremely sensitive to the varying fortunes of industry and business, declining to a position of relative insignificance in years of normal or very active expansion, and rising to a level of considerable importance during the years or periods of business recession and industrial depression. In addition to these more extended periods of expansion and recession, many industries in every country are exposed to fluctuations traceable to the successive vicissitudes of business which occur more or less regularly over short periods within each year. These shorter periods of business variations are called "seasonal fluctuations" to distinguish them from the longer periods, which are termed "cyclical fluctuations."

The influence of both of these types of fluctuations, which are regarded by many as the most outstanding causes of labor turnover, may be clearly seen from a brief citation of facts. The relation of cyclical fluctuations to layoffs is evidenced by the fact that at least 4,000,000 workers who were employed in September, 1907, were unemployed in January, 1908. Approximately 5,500,000 who were employed in the peak year of 1919 were thrown out of employment during the business slump of 1920–1922, and an estimated 12,000,000, or more, employed in 1929 were out of employment by 1933. Seasonal variations have a marked influence on layoffs in such industries as coal mining, the building trades, the manufacture of clothing, canning and preserving, agriculture, lumbering, and automobile manufacture. The estimated proportion of lost time in the clothing industry is 31 per cent; in shoe manufacturing, 25 per cent; in building trades, 37 per cent; in bituminous coal mining, 27 per cent; and in the automobile industry, 15 per cent; to mention only a few of the major industries which experience curtailed operations resulting from seasonal demands for their products.

In addition to cyclical and seasonal fluctuations, other conditions, more or less peculiar to the particular establishment, contribute to the percentage column of terminations through layoffs. Completion of temporary jobs; unexpected cancellation of contracts on the part of wholesale houses, jobbers, commission houses, and retailers; evolutionary changes in industrial technique, such as the introduction of laborsaving devices and machinery; a scarcity of raw materials or interruption in the transportation system which delays delivery; a serious breakdown in some important department of the plant which necessitates a shutdown for extended repairs; and strikes and lockouts; all contribute to separations from employment.

Reasons for Dismissal.—Each working day of the year sees a large number of employees leaving business and industrial concerns because of discharge. Close inspection of Fig. 19 will reveal the monthly discharge rate in American industry over the past 9 years. For real or imaginary reasons the services of such persons have been found unsatisfactory. Generally speaking, men and women are discharged either on account of incompetency or because of infraction of disciplinary rules and regulations. In a large number of cases, the worker is found incompetent and inefficient. He is too slow; possesses an indifferent attitude toward his work; is careless in handling materials, tools, machinery, and other equipment; is irregular in his attendance or habitually late; is suspected of soldiering on the job; or his references have been found deficient. If he is not fired for incompetence, in all probability his departure is attributed to a breach of disciplinary rules. He has been suspected of dishonesty; his disposition is so disagreeable that neither the management nor his fellows can get along with him; he is a "chronic kicker," "disturber," "troublemaker"; or has repeatedly manifested a spirit of insubordination. Sometimes, also, he is discharged because of intoxication, immorality, fighting, or excessive profanity and indecency. Occasionally he is discharged because of labor union activities, although more and more through legislative measures he is being protected from discrimination by his employer on this account.

Incidence of Labor Turnover.—If there is to be an intelligent formulation of plans and methods of reducing labor turnover and the construction of anything approaching a solution in particular cases where the problem is especially acute, an analysis must be made of the distribution of labor turnover according to such factors as occupation or degree of skill, sex, age, nationality, length of service, and education. Only in this way can management determine the incidence or the final resting place of the burden of labor turnover and the principal responsible factors.

1. *The Relation of Occupation and Skill to Labor Turnover.*—It is almost impossible to make any general quantitative determination of the relative stability of skilled, semiskilled, and unskilled occupations, because there still obtains no standardized classification of occupations on the basis of skill. Occupations and operations that in one industry are classified as skilled are in other industries designated as semiskilled, and those which in some industries are designated as semiskilled are in others classified as unskilled. Amidst so much confusion of terminology there is little hope that we shall soon be able to establish as close a correlation as should be established between the degree of skill and the rate of labor turnover.

Traditional usage divides occupations into five groups, namely, clerical, minor executive, skilled, semiskilled, and unskilled. Since the percentage of labor turnover in the minor executive and clerical groups appears in so many cases to be relatively insignificant, our chief concern must be with the other three groups. The findings of numerous reliable investigations show that the labor-turnover frequency rate among skilled workers is much lower than the rate for semiskilled or unskilled workers. In proportion to the ratio it bears to the total payroll, unskilled labor almost always shows the highest percentage of labor turnover. The following conclusion, based upon one of the most thorough studies of labor turnover made thus far in the United States is indicative of this fact: "The high turnover of the unskilled occupations is of especial importance. Here are found from one-fourth to one-fifth of the pay roll, contributing more than one-half of all plant separations in two of the years (1923, 1924) and 43 per cent in 1922, the year with the most favorable showing."[1] Moreover, careful examination of numerous statistical studies of labor turnover leads to the conclusion that unskilled labor shows the highest degree of instability, whether expressed in terms of voluntary quits, layoffs, or discharges, followed in turn by semiskilled and skilled labor. The percentage of turnover is greatest among skilled workers during the year immediately following the period of apprenticeship, largely because at such a time journeymen desire to gain the wider experience and improved knowledge and skill which invariably result from employment in different shops and industries.[2]

It is pertinent to ask why this difference is present in the relative stability of skilled, semiskilled, and unskilled labor. Several conditions account for the discrepancy. In the first place, skilled workers have a greater measure of adaptability. Being familiar with the basic technique of their industry and having considerable knowledge of the major processing from the raw material to the finished article and an understanding of the principal tools, machinery, and equipment, they can adjust themselves easily to new needs and situations. Skilled labor is relatively scarce and is expensive to develop; therefore, the employer is less hasty in discharging skilled workers in periods of normal industrial activity and retains them as long as practicable after business recession has set in. Skilled labor is much better paid than unskilled and normally has much less cause for dissatisfaction with conditions of employment. Moreover, skilled workers tend to be more conservative, voicing little or no protest against the *status quo* in industry or the existing economic order. They have a more intelligent understanding of inevitable financial losses which normally accrue from frequent migration and change of jobs. Finally, unskilled workers are, for the most part, unorganized, whereas skilled workers, because of their relative scarcity and greater intelligence, have been able to effect a high degree of unionization and efficient methods of collective bargainng. This fact makes it possible for them to obtain what they want n the way of hours, wages, and conditions of employment without eaving their customary jobs.

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[1] Industrial Research Department, Wharton School of Finance and Commerce, "Four Years of Labor Mobility; a Study of Labor Turnover in a Group of Selected Plants in Philadelphia, 1921–1924," *Annals of the American Academy of Political and Social Science, Supplement*, vol. 119, May, 1925, p. 76.

[2] For a discussion of this point see *ibid.*, pp. 70–72. Also see reports on "Labor Turnover of Certain Industries," *Monthly Labor Review*, vol. 44, February, 1937, p. 431.

2. *Sex in Relation to Labor Turnover.*—The special investigations of labor turnover thus far completed in the United States do not warrant any generalization concerning the relative industrial stability of men and women. The experiences of business and industrial establishments present conflicting evidence. In some cases, women workers manifest a greater degree of stability than men possessing the same degree of skill and length-of-service records. This difference is explained on the ground that women are less ndependent industrially than men because of a conspicuous lack of unionization and because of social custom which frowns upon the migratory woman worker. The extended experience of some firms suggests that the percentage of turnover among female employees s invariably higher and the fluctuations more extreme than in the case of male workers. There is considerable agreement among special students of the subject that "In the long-time-service groups of separated employees, the figures for males show that they are ess prone to sever connections with an establishment after having worked in it a considerable period of time."[1] This observation has been borne out more recently many times, as is suggested by the data in Table 6 showing the length of service of male and female tobacco employees throughout twenty-seven plants in the east. Here, almost 11 per cent of the Negro males had at least 20 years of service to their record, as compared with less than 2 per cent of the Negro females. Lack of skill and experience, relative physical ncapacity, marriage, and a peculiarly important relationship to the home and race doubtless tend to accentuate whatever difference there may be in the comparative turnover rates for men and women, such factors conducing to a relatively high rate for the latter. When a sufficiently comprehensive study of this phase of the problem is completed to warrant a general conclusion, it will, in all probability, prove that taking them by and large under the same qualifying conditions male and female employees manifest a similar degree of instability, with women manifesting a slightly higher rate in proportion to the numbers in industry. Particular

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[1] BRISSENDEN and FRANKEL, *op. cit.*, pp. 123, 124.

studies already made indicate such a result. An investigation of labor turnover in the cotton mills of the North and the South revealed the fact that the combined turnover rate for men and women in all mills was 142.3 per cent, the rate for women was 142.5 per cent, and the rate for men 142.1 per cent. Women constituted 41.2 per cent of the workers in all mills.[1]

3. *Age and Education as Factors in Labor Turnover.*—There is conclusive evidence that the rate of turnover among children is exceptionally high, and that, within certain limits to be described later, labor stability tends to accompany advancing age and maturity. Youthful workers are restless and show an especial tendency to change jobs during the early years of industrial employment. An extended study showed that one-third of the child workers leave their first positions within 3 months and over one-half within the first 9 months.[2] The psychological nature of youthful workers, combined with their impatient desire for economic advancement, probably accounts for this remarkable situation.

As already indicated, skilled workers move about considerably during the years immediately following completion of apprenticeship, in order to increase their skill and experience. As they grow older, adult workers, both skilled and unskilled, tend to settle down and figure less in turnover rates until they reach an age when, because of a decline in physical vigor and a consequent lessening of efficiency, some industries cease to welcome them or lay them off in favor of younger blood. Labor instability decreases as the higher age groups are reached. Those above thirty-five manifest much greater stability than those under that age, the percentage being negligible among the relatively permanent group of employees who are fifty years of age or above.[3]

Little is known of the relation of education to the stability of the working force, and the meager evidence available is inconclusive. In Chap. XII, it has been suggested that there is some correlation between education and the rate of turnover. The percentage of mobility probably is in direct ratio to educational attainment, greater adaptability resulting from an increasing quantity and better quality of education. It has been found that, in proportion to their percentage of the total payroll, high school students evidence a remarkably high degree of mobility. Generalizations on this point, however, are unwarranted.

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[1] United States Women's Bureau, *op. cit.*, pp. 15, 17.

[2] See WOODBURY, R. M., "Industrial Instability of Child Workers," *United States Children's Bureau, Bulletin* 74, p. 108.

[3] For a fuller discussion of this subject, see Industrial Research Department, Wharton School of Finance and Commerce, *op. cit.*, Chap. X.

4. *Nationality as a Factor.*—The limited studies that have been made of the relative importance of nationality as a factor in labor turnover seem to suggest that certain nationalities are probably more responsible than others for a high rate of instability, but here again caution must be exercised in interpreting statistical data. "One can say without hesitation that certain nationalities are regularly and continuously causing a higher turnover than others, but one cannot, without analysis of occupational rank, attribute this to national aptitudes."[1] Italians and Russians and other nationalities from the south and the east of Europe appear to have a much higher degree of industrial instability than Americans, Canadians, and northern and western Europeans, but one is hardly justified in concluding that this difference is due to racial or national traits. Rather is such information indicative of the generally known fact that eastern and southern Europeans have considerable monopoly of unskilled occupations in many industries and that such occupations are characterized by a relatively high degree of labor turnover. Such data, moreover, may also suggest that the "new immigrants," as they are commonly called, are employed under very

TABLE 6.—LENGTH OF SERVICE OF 6,606 WAGE EARNERS IN THE AMERICAN CIGARETTE INDUSTRY BY SEX AND COLOR, MARCH, 1935[1]

Sex and color	Number of employees reporting	Average length of service, years			Per cent of employees with service of—					
		Eastern code industry	Cigarette	Snuff and smoking and chewing tobacco	Less than 1 year	1 and under 5 years	5 and under 10 years	10 and under 15 years	15 and under 20 years	20 years and over
Males, White......	1,539	6.0	6.0	6.0	8.4	48.5	25.3	9.9	3.9	4.0
Females, White....	2,266	4.9	5.2	3.7	13.5	53.8	20.4	8.0	2.2	2.1
Males, Negro......	1,135	8.0	5.6	12.6	5.4	45.2	23.7	10.5	4.3	10.9
Females, Negro....	1,666	5.7	6.6	4.3	4.6	37.4	45.2	9.2	2.2	1.4

SOURCE: *Monthly Labor Review*, February, 1937, p. 325.

[1] Data cover a portion of the wage earners in 27 plants. Six plants and 306 wage earners were found in the North, and 21 plants and 6,300 employees in the South. There were 4,753 wage earners in the cigarette and 1,853 in the snuff, smoking, and chewing tobacco branch of the industry.

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[1] *Ibid*, p. 112.

unfavorable conditions of employment; they work for long hours at low rates of wages and under autocratic methods of supervision. Such conditons inevitably tend to stimulate instability. The relationship between nationality and turnover in the cigarette industry mainly in the South is shown by the data presented above. In this industry, Negro males have a lower turnover rate and, consequently, a record of longer service than do male whites. Partial explanation of this situation is found in the adaptability of the Negro male to this occupation.

5. *Length of Service in Relation to Labor Turnover.*—Length of service is an extremely important factor in the efficiency of the average industrial working force. It is much easier to develop and maintain efficiency and loyalty among groups of workers who, through many years of association, are intimately known to one another and are familiar with the policies, traditions, and purposes of the company, than it is among groups of employees whose ranks are constantly being thinned of old employees and recruited from new ones. Whenever old employees must be replaced or additions made because of expansion, it is important that the recruits, if carefully selected on the basis of desirable qualifications, shall be kept as a part of the working force. The cost of hiring and breaking in new men makes such a policy necessary. Length of service, of course, will depend upon many conditions peculiar to the industry and the establishment, such as the nature of the operations, general employment conditions, the ratio of skilled to unskilled positions, the ratio of male to female employees, and the administrative policies of the various departments. Length-of-service records do not, for example, show up so favorably in a seasonal industry, like the manufacture of clothing, as in an industry relatively undisturbed by these variations, such as street railway service.

The data presented above show that for the companies covered in this study, approximately half of the male Negro workers had a length-of-service record of 5 years or more and slightly more than one-fourth had at least 10 years of service. The service record for the male group was considerably higher in the snuff and chewing tobacco plants (12.6 years) than it was in the cigarette plants (5.6 years), whereas, with the male whites the average length of service in these two branches of the industry was the same (6.10 years). Again, the highest average length-of-service group in the cigarette plants was that of Negro women, largely hand stemmers, with an average of 6.6 years, and the lowest service group in both branches was that of white women. These differences are doubtless due in part to the rough and unpleasant character of the work in many of the plants.

When the percentage of employees leaving the service of a company within the first few months is great, there is need for a critical examination of employment policies, production planning and control, and methods of recruitment, selection, training, and placement; not to mention rates of pay, the schedule of hours, and physical conditions of employment. The experience of various industries and different establishments in the same industry and business is naturally not uniform with regard to length-of-service records. But it is a significant fact, revealed in special investigations of the subject, that the majority of separations occur within the first year of service, principally within the first three months. In one investigation the conclusion was reached that workers "leave voluntarily and are laid off or discharged at least one hundred times as rapidly from the under-three-months group as they are from the three-to-five-years group."[1]

Another investigation, covering a group of selected plants in Philadelphia, uncovers similar facts. In the year 1922, a period of business depression, 64 per cent of all separations were found to have been less than 3 months at any one plant and 85 per cent less than 1 year; whereas, in 1923, a year of business recovery and prosperity, a trifle over 86 per cent were in the less than 1 year group and 63 per cent in the less than 3 months group, there being little difference between the 2 years for these intervals.[2] It would seem, therefore, that short service, that is, service of less than 1 year, is an important factor in labor mobility, and the percentage of labor turnover is greatest among these short-time groups of workers. This at least indicates a possible deficiency in industrial administration and suggests a focal point of attention.

6. *Mentality and Labor Turnover.*—Recent studies have disclosed the fact that under certain conditions there may be a very definite relationship between the employees' mentality and the rate of labor turnover. One writer, for instance, reports the following results of a special study of this relationship:[3]

> In two different companies . . . experiments were made to trace this relationship. In both companies the mental alertness of the employees was determined by test and was found to have a very direct relation to

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[1] BRISSENDEN and FRANKEL, *op. cit.*, p. 141.

[2] Industrial Research Department, Wharton School of Commerce and Finance, *op. cit.*, p. 51.

[3] SCOTT, CLOTHIER, and MATHEWSON, *op. cit.*, p. 462.

> stability. In these two companies, however, the relationship was quite different. . . . The curve [mental alertness] for Company A shows that about 40 per cent of the clerks hired who have a mental alertness test score between 15 and 30 leave within six months. This percentage decreases rapidly with the higher test scores until greatest stability is found among clerks scoring between 35 and 50. For clerks scoring more than 50 the percentage of persons leaving rises again rapidly until, for those making the highest scores, the instability is even greater than for those making the lower scores. This was a serious matter for Company A, since it had already been demonstrated in this company that high score employees are of the greatest value as workers. . . .
>
> The curve [mental alertness] for Company D shows a very different situation. As in Company A the turnover rate among the employees making low mental alertness scores was high. The percentage, however, dropped sharply as far as the score of 30 when there was an obvious rise in labor turnover which was maintained over 15 points of the mental alertness scale. Then as the highest scores were reached, those exceeding 50, there was a pronounced increase in stability, a condition quite contrary to that of Company A. This curve of the labor turnover in Company D, in relation to mental alertness, revealed a peculiar wage situation which was causing instability among the middle-high employees. This influence has now been corrected.

Such results as these are easily explained. In the process of placing employees, often individuals are assigned to tasks which they are not mentally equipped to perform. If their mentality exceeds the level of that required by their new jobs, they soon become impatient, and both ambition and desire cause them to seek another type of work. If it is less than the level of that required by their jobs, they may struggle along for a while, but, if they are mentally deficient, they sooner or later either become discouraged and quit or are dropped by the management.

7. *General Environmental Influences and the Rate of Labor Turnover.*—One other factor is significant enough in its relation to labor turnover to justify separate mention. Every employer knows the importance of the stability characteristics of the general community from which his labor supply is recruited and maintained. Both the size and location of the community are influencing factors. Persons living in old and well-established cities and towns of the East, surrounded by generations of friends and relatives, are less likely to shift from one organization to another or from one community to another, than are those who have moved into the newer communities of the West.

Methods of Reducing Labor Turnover.—Since the remainder of this study consists principally of an analysis and description of methods of improving labor relations, it is unnecessary here to go into detail concerning the ways and means of reducing labor turnover. An outline of such methods, however, is desirable. First of all, it should be stated that the experience of American industries yields encouraging proof that labor turnover can be reduced when intelligent principles and methods of procedures are applied. The Ford Motor Company reduced its turnover rate from 416 per cent to less than 80 per cent in a single year; the Dennison Manufacturing Company cut its annual turnover rate from 68 per cent to 37 per cent; and many other concerns have been able to reduce the total to one-third or even one-tenth the former amount. Stabilizing the personnel of industrial organizations is more easily written and talked about than done, and yet there is every reason to believe that what these companies have succeeded in doing lies within the reach of all those enterprises that are willing and able to apply the same basic principles and methods of procedure. These may be summarized as follows:

1. *Adequate Statistical Control.*—This will involve a carefully worked out system of records for the keeping of necessary data and will make possible the recording of complete information concerning the distribution of separations by shops, departments, occupations, sex, age, race, nationality, length of service, and education. Such control will involve also a critical analysis and clear presentation of statistical evidence, so that the constituent phases of the problem may be manifest to the management and adequate funds be apportioned for its solution.

2. *Scientific System of Recruitment, Selection, Placement, and Follow-up.*—As stated in detail in the chapters on these subjects, such a system will strike at the roots of labor instability by bringing to the plant employees who will be likely to stay, requiring a physical and mental test of all new employees, placing the right man in the right job, and assuring proper adaptation and progress by introduction and follow-up.

3. *Job Analysis and Specifications.*—Job analysis and job specifications will make possible the intelligent application of scientific principles and methods of selection and placement. Men and women in industry will thus be assigned positions for which they are physically, mentally, and technically qualified. As a consequence, a considerable portion of dissatisfaction with jobs will

disappear, a condition which will react favorably upon the rate of turnover.

4. *Enlightened Labor Supervision.*—This involves the application of intelligent principles and methods of labor maintenance, including desirable standards of wages, hours, and conditions of employment, a definite system of transfers and promotions, a program of health and safety, a rational code of shop rules, facilities for education and training, opportunities for recreation and amusement, a system of nonfinancial incentives, effective agencies for publicity, and a program for the improvement of the industrial community.

5. *Joint Control.*—There should be definite means of communication between management and men for the hearing of grievances and complaints and the consideration of suggestions for improvement in the technique and administration of the enterprise. These will include a plan of joint control through committees representing management and the workers, whose functions will be sufficiently general to cover the review of shop regulations, grievances, and discharges, and to encourage mutual understanding and general cooperation.

CHAPTER XIV

ABSENTEEISM AND TARDINESS

Absenteeism.—Absenteeism refers to the worker's absence from his regular task, no matter what the cause. Tardiness is a temporary form of absenteeism, having reference to the worker's lack of punctuality in arriving at his place of work. Like labor turnover, both absenteeism and tardiness are in part a manifestation of that spirit of irresponsibility and indifference which has prevailed so generally where modern industrialism, with its loss of ownership and control for the wage earner, has been developed. The wage relationship, centering about a purely cash nexus, is characterized by uncertainty, instability, and lack of interest and devotion to the job. In the performance of employment duties, workers are impelled by a motive of fear and necessitous economic circumstances, rather than by a real, sincere, and creative interest either in the job or in the company. As long as this state of mind obtains, the problem of bad timekeeping will continue to be a serious one, becoming acute in periods of emergency and labor scarcity when the workers enjoy a measure of real economic independence.

Absenteeism is frequently a precursor of labor turnover. Many workers absent themselves from their regular jobs to search for more attractive ones. Excessive absenteeism invariably results in discharge from the service of the company. Absenteeism, or lost time, as it is termed in Great Britain, refers to absence from work for whole days or half days. When the absence is for less than a half day it is usually classified as tardiness. While tardiness does not slow up production so much as do absences, it is detrimental to the morale of the working force and is often responsible for idle machine time and lessened efficiency on the part of the operative himself and all those whose work is related to his. For this reason absenteeism and tardiness are considered together, although the treatment of them may not always be identical.

The real problem of absenteeism is how to handle it, especially in cases of workmen who feel that they are entitled to take a day or so off whenever they are inclined. Not all absenteeism is undesirable, any more than is all labor turnover. In industries where the work is excessively fatiguing, periodical absence from the job constitutes a sort of defense mechanism for the tired workman and tends to prevent an abnormal accumulation of fatigue poisons and a resultant breakdown in health. It is imperative that immediate attention be given to conditions of employment that are compelling absenteeism on the part of willing, industrious, and thrifty workmen. The chronically absent or tardy worker, who is not overfond of work or who cannot stand too much prosperity, constitutes an even more serious problem for the employer.

Extent and Measurement of Absenteeism.—The method of measuring absenteeism is simple, involving merely the division of the total number of hours of lost time by the number of hours that could have been worked on a full schedule by each workman. The formula used is

$$A = \frac{L}{F}$$

in which A represents the percentage of absenteeism, L the number of days of lost time, and F the total number of possible working days. Thus, if a given workman could have labored 300 days last year but actually worked only 280, his percentage of lost time was $^{20}/_{300}$, or 6.7 per cent.

Many studies of absenteeism have been made, but adequate statistics are still lacking which would show the importance of this problem for whole industries. These data, although usually for individual companies, are none the less instructive. The best records come from England, where reports on over 14,000,000 gainfully employed persons included in the Compulsory Health Insurance System show that in 1934 an average of 14 days per person was lost from work.[1] A comprehensive study recently made covering the United States showed that the gainfully employed worker in this country is sick in bed on the average of 2.2 days per year.[2] These figures do not include the many interruptions other than those resulting from bedridden illness which keep the employee from his place of work for additional days during the average year.

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[1] "Psychological Factors in Sickness Absenteeism," *Safety Engineering*, vol. 72, September, 1936, p. 124.

[2] FALK, I. S., MARGARET C. KLEM, and NATHAN SANAI, "The Incidence of Illness and the Receipt and Costs of Medical Care Among Representative Families, Committee on the Cost of Medical Care," *Publication* No. 26, 1932, p. 81.

The extent of absenteeism is further illustrated by special reference to specific concerns. A steel company employing 9,733 men discovered that it was losing a total of 259,690 man-days per year through absences of its employees. This was an average of one day out during every 13 working days, 23 days per year of 300 days, or a total for the company equivalent to a whole year's service of 300 days for 965 men, and a wage loss of 8 per cent of the total annual payroll.[1] A textile plant employing 442 workers discovered that during 1 year of 222½ operating days its employees had lost on the average 1 day in every 19, or 16 days per worker during the year in wages, some 5 per cent of the company's total payroll for the year.[2] A study of four different cotton mills showed that time lost from work varied from 3.1 per cent in one mill to 16.8 per cent in another.[3] In three of the mills, the average number of days lost for men ranged from 6.5 to 33.5; for women, from 11.9 to 69. In a recent study made in California, it is estimated that the average worker loses from illness absence alone approximately 3 per cent of the working year.[4] Although inadequate, this evidence supports the conclusion that absenteeism and tardiness cause lost time in American industry of some 7 per cent or more per year. Obviously, any effective measure initiated to reduce absenteeism will pay substantial dividends to all parties concerned.

The Causative Factors.—Experience of American industry indicates that the causes of absenteeism are gradually becoming, through proper record procedure, less difficult to determine. Without attempting a rigid categorical classification, experience suggests the following causative factors:

1. Conditions existing in the industry.
2. Conditions external to the industry.
3. Conditions developing in the personal life and experience of the workers.

1. *Causes Existing in the Industry or the Plant.*—These are numerous. Among the major ones are fatigue, occupational sickness, and industrial accidents; insufficient wage incentives; faulty selection and placement of employees; and insufficiency or irregularity of supply of raw materials, machinery, and equipment.

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[1] GOULD, ERNEST C., "Meeting the Absentee Problem," *Textile World*, vol. 69, no. 2, Jan. 9, 1926, p. 13.

[2] *Ibid.*, p. 5.

[3] United States Women's Bureau, *Causes of Absence for Men and for Women in 4 Cotton Mills*, vol. 69, 1929, pp. 1–22.

[4] Unpublished estimates made by the *California Medical Economic Survey*, 1937.

Other causative factors include the poor scheduling and routing of work; temporary or sporadic breakdowns; undesirable conditions of employment, such as inadequate lighting, heating, and ventilating facilities; excessively long hours of labor, including a long regular shift and frequent overtime and Sunday work; excessive monotony, noise, vibration, and disagreeable tasks; insufficient rest periods and holidays; and friction with the foremen. In seasonal industries having high production schedules at intermittent intervals and in all periods of abnormal industrial activity, it is often necessary to employ persons physically, mentally, morally, and technically unqualified to do the work required of them. Many such persons are unused to the discipline of industrial life and are incapable of regular employment.

2. *Causes External to the Industry.*—These comprise such factors as inadequate housing accommodations near the establishment, which force the worker to live some distance from his work. This conduces to tardiness and compels the worker to rise early in order to "make the gate on time." Closely associated with this condition is the absence of sufficient transportation facilities, such as uncertain and irregular streetcar service or a breakdown of the automobile. A general tie-up or interruption of transportation by a strike on the railroads or on steamship lines may delay delivery of raw materials, thus causing lost time. Congested housing conditions contribute to sickness and so enhance the percentage of absenteeism. Lack of recreational opportunities in the community encourages workers to lay off and go to distant cities for an outing. The prevailing condition of the labor market has a direct influence on absenteeism. When jobs are abundant, workers are prone to lay off and go in search of better opportunities in other plants. During such times, rules governing attendance are not likely to be rigidly enforced. Climatic conditions constitute a significant factor. Excessive cold or heat, humidity, snow, and rain conduce to absenteeism, especially in those occupations in which much of the work is done out of doors, as in the building trades and in railroad yards. The time of the year and the day of the week enter into the causation of absenteeism. Saturdays and Mondays and all days immediately following holidays figure largely in the statistics of lost time.

3. *Causes Arising in the Lives and Experiences of the Workers.*—These also are numerous. In many instances, as in cases of illness and accident, they are related to the first set of conditions, or those which develop in the office or plant. The household duties of married women frequently contribute to absenteeism among female

workers. Sex is a factor also, the percentage of lost time being higher among women than among men employees. Indifference, laziness, discontent, and excessive consumption of alcoholic liquors account for a considerable portion of absenteeism, as does also a love for pleasure and recreation. The worker's standard of living affects his faithfulness to his job. If his income is in excess of the requirements of his standard of life and he is not thrifty, he is inclined to prefer the leisure of a frequent holiday to the satisfaction of additional wants which he has not definitely and habitually acquired. The absentee rate among Southern Negroes appears to be high because their wants are few and easily satisfied. The higher standard of living of white American workmen encourages more faithful attendance at work. Lateness often becomes habitual, and some executives claim that the major percentage of lateness is the result of habit.

Sickness and accidents have generally been found to be the major causes of absenteeism. In two English factories where time-keeping records were especially complete, it was found that in one sickness was responsible for 46 per cent of all absences and in the other this factor accounted for 54 per cent of the total.[1] A careful study by the United States Public Health Service led to the conclusion that the average American workman loses 9 days annually from work because of illness.[2] An investigation of South Carolina cotton-mill towns showed that illness was the causative factor in 32.2 per cent of the total number of days lost.[3] The United States Steel Corporation found that over a period of six years, with 300 days counted to the average year, in a plant employing 6,600 men, the amount of days lost per worker was 6.2 per cent in steel works where the accident rate was high, and 2.4 per cent in the yards where the accident rate was relatively low.[4] The Philadelphia Gas Works Company found that out of 2,500 employees, 1,810 cases of illness were the cause of absences over a 6-month period, and that eight times as many days were lost because of illness as because of accident.[1] In a textile mill, 43.4 per cent of all absences were found to be due to illnesses, 4.3 per cent to accidental injuries, 7.8 per cent to domestic duties, and the remaining 44.5 per cent to miscellaneous conditions, such as weather, family moving, personal business, drunkenness, oversleeping, rest, company at home, sickness at home, and the like.[2]

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[1] LOVEDAY, THOMAS, "The Causes and Conditions of Lost Time," *Report of the Health of Munitions Workers*, no. 7, Committee on Industrial Fatigue and Efficiency, 1917, Cd. 8511, p. 48.

[2] United States Public Health Service, "National Health Survey, 1935–1936," *Monthly Labor Review*, vol. 46, March, 1938, p. 668.

[3] SYDENSTRICKER, EDGAR, B. S. WARREN, and JOSEPH GOLDBERGER, "Disabling Sickness Among the Population of Seven Cotton Mill Villages of South Carolina in Relation to Family Income," *United States Public Health Service, Reprint, Bulletin* 492, p. 11.

[4] KEIR, J. S., "The Reduction of Absences and Lateness in Industry," *Annals of the American Academy of Political and Social Science*, vol. 71, May, 1917, p. 143.

A special committee investigating absenteeism due to illness and accident during 1935 in 31 cement mills of the Portland Cement Association discovered that the average loss for each person ill was 6.41 days during the year. Respiratory diseases caused 55 per cent of illnesses and 38 per cent of the time lost. Abdominal and digestive illnesses caused 19 per cent of all absenteeism and 22 per cent of total time lost. Miscellaneous illnesses, most important of which were rheumatism and arthritis, accounted for 25 per cent of illness absenteeism and 40 per cent of lost time. Occupational injuries caused about one-half as many absences as nonoccupational injuries but were more severe. For every 100 absences due to illness, three absences from occupational injury occurred, and for every 100 days lost due to illness, 22 days were lost because of occupational injury. The average loss to each person ill was $19.86; to each person injured outside the plant, $29.85; and to each person injured at work, $167.23. The committee reported that in the Portland cement industry, as in other industries, the most significant illnesses from the viewpoint of lost time and frequency of absence are the less severe and, therefore, the preventable types.[3] While these data refer to an occupation recognized as hazardous, they show how important a cause of absenteeism accident and illness can become in certain types of industries.

Distribution of Absentee Frequency.—From the investigations that have been made in certain plants in the United States, interesting information, although not in every particular convincing, has been gathered with regard to the distribution of absenteeism according to marital status, age, nationality, sex, climatic, and occupational factors. These data are of some importance in the control of the problem, and the conclusions drawn from them should be given consideration by every manager of industrial relations. Certain commonly held impressions receive a severe jolt in some of the evidence collected. For example, one company found that single employees lost much less time than married persons, and single males less than single females. In another instance, a new England rubber company kept a record of absences due to disability lasting 2 days or longer (1927–1928). The frequency of sickness causing absence was 31 per cent higher among married than among single women, and the duration of illness among the former was also considerably greater.[1] Yet, it is commonly believed that single persons lose more time than married persons. Statistics show that both married males and females have a smaller labor turnover than single persons, but this stability is offset by a higher rate of absenteeism among them.[2] ✓

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[1] INMAN, R. B., "Illness vs. Accidents," *National Safety News*, vol. 22, December, 1930, p. 52.

[2] GOULD, *op. cit.*, p. 13.

[3] CURLES, A. J. R., "Absenteeism in the Cement Industry," *Rock Products*, vol. 39, December, 1936, pp. 65–67.

Sex, like marital relationship, is a responsible factor. The Edison Electric Illuminating Company reports that female employees tend to be absent on account of illness much more than males and lose twice as many days through sickness as are lost by males.[3] The Dennison Manufacturing Company found in its factory departments an absentee record of 5.2 per cent among the women, as against 3.5 per cent among the men, and, in the clerical sales division, women showed a percentage of 2.6 per cent, as against 1.1 per cent for men. In some departments there was no difference. Physical limitations and the responsibilities of home life account for the disparity between men and women in the matter of absenteeism.[4]

The age factor would naturally enter into percentages of tardiness and absenteeism. Experience indicates that youthful employees are more careless in the matter of punctuality and attendance than are more mature workers. The Philadelphia Gas Company reports that the ages from forty-one to fifty and from twenty-one to thirty are ages most affected by severity of illness. A farm-implement manufacturing company recorded disabilities from sickness lasting 8 or more days (including those due to industrial accidents) and found the number of days lost per man per year rose faster with age than did the frequency of illness, owing to the longer durations of disability in the higher age groups.[1] In general, the time lost by male workers below the age of forty on account of illness tends to be lower than the average male disability, but beyond forty, males show a rapidly increasing morbidity rate. In the case of female employees the rate remains less than the average up to age thirty, but increases beyond that point.[2]

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[1] BRUNDAGE, DEAN K., "Incidence of Illness among Wage Earning Adults," *Journal of Industrial Hygiene*, vol. 12, November, 1930, pp. 338–358, and December, 1930, pp. 381–400.

[2] QUINBY, R. S., "A Study of Industrial Absenteeism," *Monthly Labor Review*, vol. 13, no. 4, October, 1921, p. 4.

[3] BRUNDAGE, *op. cit.*, p. 349.

[4] KEIR, *op. cit.*, pp. 144, 145.

There is considerable uncertainty as to the correlation between nationality and absenteeism. Some companies have found that American-born workers tend to lose less time from sickness and accident than most other nationalities. There is no ground for a positive conclusion in this particular, however, and a greater amount of evidence will be necessary before such a conclusion can be arrived at definitely.

For both men and women, the percentage of absenteeism is evidently higher on Monday than on other days of the week, decreasing gradually until Saturday when it rises again slightly. It has been found that the rate of absenteeism rises rapidly on dark, inclement winter mornings and is generally high in bad weather at all seasons, especially among outside workers. In the winter months, moreover, the percentage of sickness increases and with it the percentage of absences. High humidity, snow, and rain augment the rate of tardiness and absenteeism.

Finally, experience is the basis for the conclusion that a more or less definite relation exists between religious belief and the distribution of absenteeism. Many orthodox Jews, Roman Catholics, and Seventh Day Adventists absent themselves from work in order to attend important services of their churches or, as in the case of orthodox Jews and Adventists, to keep their sabbath, which falls on Saturday.

Some Economic and Social Results.—The economic and social losses accruing from absenteeism and tardiness cannot be determined accurately. It is difficult to make even an approximate estimate of such losses because so many factors and considerations are involved which do not lend themselves to dependable measurement. In the first place, there is a lack of convincing evidence concerning industrial absenteeism because records are still inaccurate and incomplete. Only about one out of every ten organizations attempts to understand this problem or makes any effort to solve it. In many instances, it is impossible to discover what is included in statistical data on absenteeism, and frequently no allowance seems to be made for such items as vacations. In all probability a certain amount of absence from work is essential to the achievement of the highest efficiency, since it functions as a defense mechanism against physical disability.

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[1] BRUNDAGE, *op. cit.*, pp. 350–351.

[2] QUINBY, *op. cit.*, pp. 716–717.

Despite these and other qualifying considerations, students of scientific management and employers of labor have generally concluded that the percentage of absenteeism and tardiness is far in excess of the normal requirements of the individual workman—far too great to assure the maintenance of maximum efficiency. A conclusion equally general in its acceptance is that employers, wage earners, and society suffer definite losses from excessive absenteeism. A few attempts have been made to determine the economic losses incurred from this cause. The Dennison Manufacturing Company determined the average loss to be 42 cents a week to each female factory worker and 49 cents a week to each male factory worker, the conclusions being based upon an average weekly wage paid to its employees at the time the study was made. The total wage loss was put at $50,000 a year. An industrial concern in Detroit having a large working force stated it was spending about $50,000 a month to prevent absences and considered the money well spent.[1] A railroad company employing 1,692 office employees estimates that for the year 1925 the average loss per employee on account of absenteeism was $46.20.[2]

Practically every employer recognizes that lost time is a source of waste for him. The absence of a regular worker means that machinery and equipment remain idle or are manned by less experienced workmen, if not by inexperienced ones. Occasionally, a less experienced workman performs the new task with greater enthusiasm than the experienced worker. Generally speaking, however, the output is not so great, and there is more likelihood of damage to machinery and equipment. Another source of waste growing out of absenteeism is the fact that frequently tasks and operations are performed by a group or gang, and unless every effort is made to train each of the workmen to take the place of the other, the absence of one or more of the group diminishes the general productivity. In any event, the absence of regular employees inevitably has an adverse effect upon the profits of the employer, if not through lowered efficiency in man power and idle equipment, certainly through changes in work schedules, increased cost of administration in finding substitutes, and clerical effort required in recording and following up absences.

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[1] Keir, J. S., *op. cit.*, vol. 71, pp. 140, 141.

[2] Hackett, J. D., "Lost Time," *Management Engineering*, vol. 4, no. 5, p. 406.

The financial losses to absentee workmen have already been indicated. Figuring absenteeism at the conservative estimate of 6 per cent per year or 18 days a year as an average for 30,000,000 gainfully employed workers in the United States, Prof. Paul H. Douglas some years ago estimated a total loss of 540,000,000 work-days. By assuming an average wage of $5 a day, the total wage loss was placed at $2,700,000,000. This was, of course, exclusive of lost time caused by strikes, lockouts, and unemployment, which would have swelled the total to an enormous figure.[1] By applying these same rates to the present army of 50,000,000 gainfully employed workers, the current losses would be estimated at the staggering totals of approximately $4,000,000,000 annually. But immediate and direct financial losses are not the only form of waste to the workman. Absenteeism breeds absenteeism, instability, and wanderlust. Moreover, when absenteeism becomes a habit, which it easily does, there is not only this general moral degeneration but a distinct loss of skill and efficiency. Interest in the occupation and in the plant is decreased, and returning to work the laborer finds it difficult to get started and to regain his old stride. A lowering of output is especially noticeable among pieceworkers when absence has interrupted their habit of work.

That society sustains a loss on account of lost time there can be no doubt. Whatever tends to lower the efficiency of industry and reduce its output is inevitably reflected in a lessened supply of commodities and a higher price level. Moreover, it must be remembered that by decreasing the income of the workmen, absenteeism makes them less able to meet the normal needs of themselves and their families and may necessitate some form of direct or indirect relief from the community or state.

Methods of Improvement.—In most organizations, little attempt has been made to reduce absenteeism to the unavoidable minimum, but in the increasing number of cases in which a more enlightened and constructive personnel policy is being adopted the results are gratifying. Divers ways and means have been introduced to discourage unnecessary tardiness and absenteeism, the method being adjusted in many instances to the peculiarities of the local situation. The primary point of attack in any plan for the reduction of absenteeism is the establishment of an efficient department of industrial relations, the major functions of which will be the collection of data on absenteeism, analysis of the causative factors, and the provision of ways and means of reducing absences to the unavoidable minimum. Absences are usually reported daily to the central personnel office by the various foremen or department heads. Many companies insist that all such reports shall be in by 9:00 A.M.

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[1] DOUGLAS, P. H., "Absenteeism in Labor," *Political Science Quarterly*, vol. 34, December, 1919, p. 591.

The follow-up of absences is an extremely important and delicate part of the program for reduction of absenteeism. On the second or third day of absence, a nurse or some other special investigator is dispatched to visit each absentee. This individual determines as far as possible the reason for the absence, probable length of disability, and the opportunity or necessity of rendering some service in cases of sickness or accident. Frequently there is recourse to the diagnosis made by the attending physician, or the nurse makes an informal preliminary diagnosis and then enlists the service of the plant physician. One company recorded 30,000 home visits by its physicians and nurses within a period of a little over 2 years. The Ford Motor Company, the first to use the home-visiting system, succeeded in reducing absences from about 10 per cent to less than 0.5 per cent by means of this system.

The investigation yields many benefits to employer and employee alike. Investigators are constantly on the lookout for any sort of reaction toward the company, whether favorable or unfavorable. In this way, causes of discontent and deficiencies of administrative policy are often uncovered. If a foreman is not displaying the right attitude toward his men, or if the worker feels that the physical conditions of employment are undesirable and injurious to health, complaints will often come to the surface, provided the company's representative has the confidence of the employee. Misunderstandings sometimes develop from ignorance, oversensitiveness, and misinterpretation of facts and policies. The nurse can often iron out these difficulties and dispel misunderstandings. In many cases where dissatisfaction is discovered, the workers are invited to come to the employment office for a conference with regard to the causes. Moreover, this service enables the company to keep constantly informed of all cases needing assistance, either medical or financial, a practice which makes it possible to render help where it is badly needed. Such aid often creates a feeling of gratitude and stimulates appreciation and loyalty.

General knowledge of the fact that absences are investigated tends in itself to reduce the rate of absenteeism materially, and prompt medical aid cuts down the length of the absence in cases of sickness. Even if attendance records are not considered in wage adjustments, the moral effect is good. If a workman knows that every absence is recorded, he is less likely to be thoughtless about laying off. Moreover, these records have value as a basis for letters of recommendation when employees leave the company for service with another which requires such letters, and they become a powerful incentive to a creditable attendance record when workers realize the significance of this use of data. Finally, this whole service makes possible a personal contact which is badly needed in these days of large-scale production. Many companies which have introduced investigation of absences report that they have met little or no opposition on the part of the workers, owing to the fact that the visiting nurses are very careful as to the kind of impression they create. After all, the degree of success achieved by this delicate service will depend upon how the thing is done and who does it. Due regard must be given to the psychological aspects of the situation. Instead of sending out a nurse or a "white-collar" clerk, some companies appoint a rough and ready factory man to conduct the investigation, believing that he is better qualified to approach the workers than are those who do not belong to the same occupational group. Attendance records have been bettered by these and many other plans.

With regard to all forms of investigation, it is necessary to exercise tact lest the workers judge the whole scheme excessively paternalistic and become antagonistic to a policy which often redounds to their own advantage. Many workmen have legitimate excuses for being absent from their work, and many others are absent in search of better jobs. Unless great care is exercised, investigation may degenerate into inquisition, and the workers' resentment will be justly aroused. Too early investigation, moreover, involves unnecessary labor and expense, so most companies, especially the larger ones which do work of this sort, do not begin the investigation until after an interval of 2 or 3 days. This tends to preclude hasty interference with the personal business of the workman, so that if he is taking a day off to look for a new job or is just resting for a day or two he does not have to worry about a visit from the company representative.

Sometimes this problem has been met by slight changes in the working schedule. One company solved its problem, largely one of punctuality, by shifting working hours from the usual office hours of 9:00 A.M. to 5:00 P.M. to a new schedule of 8:45 A.M. to

4:30 P.M., with 45 minutes off for lunch instead of the customary hour.[1] After this simple change, employees avoided peak traffic hours in traveling to and from work. This method is possible only in cases where no rigid hourly schedule within the working day has to be followed.

Many companies adopt more exacting methods to reduce tardiness. Fines are frequently imposed. One company discovered that about 95 per cent of tardiness occurred within the opening half-hour, so a small fine was levied on lateness within that period, that the habit was checked considerably. Another introduced the plan of docking each worker's time 15 minutes if he was late any fraction thereof. A steel company began to send out weekly reports to each department head showing the standing of his department on absenteeism as compared with the entire "organization." As a result of this close check up, absenteeism decreased from 24 per cent of the payroll to 8 per cent in 10 months' time.[2] Daily reports are now sent out, causes are determined by the supervisors, and records are returned to the personnel office. After several days, the personnel office sends out an investigator to the home of the employee, not to spy on the absent worker, but rather to offer aid and advice if such is needed. In developing this plan, the worst shop in the plant had a punctuality record of 15 per cent during the first week, 22 per cent the second, 30 per cent the third, then 44 per cent, and 6 years later, 58 per cent. All offices showed an increase in this rate from 68 per cent when the plan was started to 94 per cent 6 months later.[3]

Instead of imposing fines, some manufacturing firms follow the scheme of making tardiness difficult. If a man arrives late at the gate and feels that he has a legitimate excuse, his case is referred to the chief timekeeper who in turn refers it to the foreman. This plan has proved effective because workers prefer being on time to going through the unpleasant red tape. Latecomers are sometimes required to sign a slip stating reasons for tardiness. This "late ticket" is filed as a part of the personnel record. The Edison Electrical Appliance Company, for instance, attributes the 75 per cent reduction it has experienced in tardiness to an "honor system" whereby a tardy employee signs a slip, noting the time, which reads, "I am late." The signing of slips is not enforced, but slips turned in go to the department heads who prepare weekly tardiness reports. Each month every department is rated, and honorable mention is given to those with perfect records.[1]

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[1] "Staggering Decreases Tardiness," *System*, vol. 60, August, 1931, p. 109.

[2] BERLINER, J. J., "Workers on Time When Competitive Spirit Is Stimulated," *Iron Trade Review*, vol. 84, May 16, 1929, pp. 1317–1318.

[3] *Ibid.*

As might be expected, fines and other exacting penalties have met with varying success, and there is a growing conviction that they do not constitute the most desirable method of reduction or elimination of tardiness and absences. Considerable feeling of resentment is aroused by them, especially when the proceeds from fines are appropriated by the company. Some firms guard against this undesirable effect by providing that the revenue from fines shall be placed in an employees' trust fund for the financial support of their general activities. Even with such safeguards, however, a system of fines can hardly be accepted as conducive to the best results, since many workmen will pay a fine feeling that, in so doing, all moral responsibility on their part for punctuality and regularity has ceased. In any event, it is difficult to distinguish between legitimate and unjustifiable fines, so it is better not to use them. Instead of resorting to a system of fines, some firms have endeavored to centralize responsibility. Absences are reviewed by the general superintendent and by the works manager who in turn takes up the matter with the department foreman. In cases of habitual absenteeism, the power of discharge is an effective and legitimate weapon.

There are to be found in industry varying methods of penalty and bonus systems ranging from this negative method of fines to the positive method of paying substantial cash bonuses. One year the Federal Life Insurance Company presented four of its employees with watches for perfect attendance. The following year, those with either perfect attendance or punctuality records were recognized in similar manner. As a result of this incentive, during the first 9 months of 1929, 52 employees were eligible for attendance honors. The company accepted no individual excuses for tardiness or absence since the awards did not seek to place a cash value on punctuality but simply to recognize it. As a result of improved morale, less absenteeism, and less tardiness, the efficiency of the company was so increased that, although the company's life insurance business doubled in volume, the force in the department was augmented only 60 per cent.[2] Obviously, not all this increased efficiency could have resulted from decreased absenteeism and tardiness, but the company does attribute a substantial portion of this improvement to these causes.[1]

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[1] SMITH, C. P., "No One Likes to Say 'I am Late,'" *System*, vol. 59, April, 1931, p. 291.

[2] CAVANAUGH, L. D., "Late or Absent," *System*, vol. 57, January, 1930, pp. 38–41.

The New York Stock Exchange allows any employee with a perfect record for 3 months to have 1 day's leave of absence with pay. After four quarters of perfect attendance he receives a total of 7 days. Honor days have no cash value, and no absence or tardiness is excusable. The Jewel Tea Company of Chicago refuses pay increases and promotion to an employee tardy three times during a 4-week period. A bonus is also given for perfect attendance. A record of the number of absences and tardinesses is posted every 4 weeks. During 1 year, two employees received $25 for perfect records, the following year eight were recipients of the bonus. Theater parties have been given to those with best punctuality and attendance records. As a result, the latter company reports that the average tardiness dropped from 10.3 times per employee to 6.2 in 1 year.[2]

The percentage bonus is the most common device used for decreasing absenteeism and tardiness. The Metropolitan Life Insurance Company, after several years of experimentation, finally accepted this method as best suited for the needs of its home office. Under this scheme, 10 per cent of one week's salary (not to exceed $6) is offered to any home office employee with a perfect record for 30 consecutive business days. Employees register in the morning and are required to return promptly after the lunch hour. It is a continuous incentive plan since, after an absence or tardiness, the employee may begin a new period. No distinction is made between avoidable and unavoidable tardiness or absence.[3]

The Leeds and Northrup Company, manufacturers of electrical instruments, has had an attendance bonus in operation for a number of years which applies to 313 men and 79 women out of a total payroll of 655 persons. Under this plan, if the weekly timecard shows punctuality every morning and afternoon, with perfect attendance during all working hours, a cash bonus of 5 per cent is added to the weekly wage.[4] The bonus is still paid if during the month not more than one unavoidable absence or tardiness is experienced. If the employee has a perfect record for 3 consecutive months, two absences or tardinesses are allowed before forfeiture of the weekly cash bonus.

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[1] *Ibid.*

[2] "Tardiness," *System*, vol. 57, May, 1930, p. 423.

[3] *Ibid.*

[4] ALFORD, L. P., editor, *Cost and Production Handbook*, 1934 ed., p. 655.

Largely through the influence of this bonus the management has been able to reduce the days lost to approximately 50 per cent of the average for competitors in the industry.

Large companies usually spend more than small companies in offering this type of attendance bonus, but at most it has proven to be a profitable way to avoid losses which otherwise oftentimes cut deep into the profits of the management, not to mention wage losses of employees. Among 43 relatively small companies surveyed,[1] those employing less than 50 people were found to have spent during 1927 an average of $46.38 each on attendance and punctuality awards. Those employing from 50 to 100 persons spent an average of $38.26; those with between 100 and 250 employees spent an average of $66.01 in making these bonus awards. Thus, with an increase of employees within an organization, it appears both necessary and wise to deal with this problem by the issuance of substantial awards for perfect records.

The Case for the Bonus Plan.—The bonus plan is an attempt to apply preventive rather than remedial measures in establishing punctuality and regular attendance. Its chief strength lies in the fact that a powerful incentive is offered to employees for maintaining acceptable records. Perfect attendance and punctuality mean much to both the management and the worker. The employer suffers chiefly through the effect of tardiness and absence upon production. Any plan successful in diminishing these costly influences is desirable. Especially is this so when improved results can be obtained at relatively little additional expenditures. For the worker, the bonus system is an incentive to decrease absences to the unavoidable minimum.

Because it involves no element of competition, the individual bonus system has been rejected by some firms and in its stead the gang or group bonus plan has been applied. This system provides a bonus for the crew having the best production record. By pitting gang against gang, this scheme stimulates competition and thus has a definite effect upon tardiness and absence. There is a conspicuous effort on the part of the group to eliminate the habitually tardy and absent in order to assure a chance for the bonus. Many companies which have used the bonus plan in periods of labor shortage when absenteeism became a great source of waste and inefficiency have testified to the value of such an incentive. Frequently, it has reduced tardiness and absence 30 per cent or more. At the time of the introduction of the plan in one plant, only 69 per cent of the workers qualified for the bonus, but, in a short time, 81 per cent qualified, and the percentage of absence and tardiness was cut by a figure varying from 33 to 46 per cent in the various departments.

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[1] National Industrial Conference Board, *Industrial Relations Programs in Small Plants*, 1929, p. 43.

But there are weaknesses to the bonus scheme. The necessity of making a fair adjustment of excuses may become burdensome and involve much time and expense. Certain executives contend that payment for promptness and regularity not only causes friction between management and men but is an inexcusable and unethical practice, because it is equivalent to bribing children to be good by giving them candy. It is appropriately asked: Why pay an extra amount of money for a duty and service which is understood to be a part of the employment contract and is to be expected as an essential responsibility in the fulfillment of the terms of that contract? Finally, when a worker has lost his chance for the bonus in a given week, he tends to become indifferent to the whole business after the first day's loss.

Some Prerequisites to Improvement.—No amount of rigid discipline, investigation, and bonus payment will be sufficient to reduce lateness and absence, unless the ordinary conditions of employment are such as to stimulate interest in promptness and regularity and to create a sense of loyalty and appreciation on the part of the workers. Specifically, this means many things. The wage scale must be adequate and compare favorably with the wage standards of other concerns. The physical conditions of employment must be such as to encourage the protection of workers from accident and sickness. Cases of sickness and accident must be detected promptly, and, when necessary, workers must be sent home, given expert medical attention, and urged not to return to work until they are perfectly well again. The attitude of foremen and higher executives toward the employees must be congenial and their methods of supervision just, in order that causes of friction may be reduced to a minimum. The length of the working day must be reasonable, and overtime periods must be kept as low as possible. Every attempt must be made to encourage a spirit of cooperation, sobriety, thrift, and industry among the workers.

CHAPTER XV

THE STIMULATION OF INTEREST

Cooperation and Interest in Industry.—Industry is a cooperative undertaking between employers and workers. In speaking of the importance of close cooperative effort, Charles M. Schwab, one of the great American industrialists, once said,

> Herein lies a field where expert service in enlisting the interest and confidence and goodwill of the worker is just as important as the study that has been given to the characteristics and utilization of materials. Happiness of the worker lies in the doing of the day's work with a zest and goodwill, under the spur of encouragement and rewarded with the satisfaction of achievement. This requires the cooperation of labor itself not merely of the hand but of the heart as well.[1]

Such cooperation involves a live, intelligent interest in the particular job and enterprise with which one is associated. The millions of dollars being spent to create, restore, or maintain interest, good will, and cooperation on the part of employees is indicative of the importance of this factor in personnel administration.

All too frequently employees are not interested either in the job or the company, and this lack of interest is a basic cause of industrial waste, spoilage, inefficiency, and conflict. Management is constantly asking why it is that men and women are not interested in their work and are so careless with tools and materials which cost large sums of money. Inability or unwillingness to make an analysis of the real causative factors is responsible for the common conception that such conditions develop from the natural indifference, indolence, and dishonesty of human nature, which impel men and women to want something for nothing. If, as is frequently the case, the modern workman has no impelling interest in his work, it may be because the conditions under which he toils are seldom such as to elicit ready response. Creative and efficient work is inseparable from a spontaneous interest in what one is doing. As we have already seen, modern industry usually tends to stifle rather than to stimulate creative interest in work. In many of our industries the worker is no longer an all-around mechanic, a skilled craftsman, finding real joy in the practice of his trade; rather, he is a machine tender, an automaton whose function it is to perform the same series of minute operations day in and day out throughout the year. One can hardly be astonished by the fact that the worker accepts this state of affairs as inevitable and unchangeable and devotes much thought and energy to the organization of movements for reducing the number of hours in the factory and increasing the rate of pay.

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[1] SCHWAB, CHARLES M., "Human Engineering in American Industry," *Railway Age*, vol. 83, Dec. 10, 1927, pp. 1151–1154.

Is this lack of interest indicative of the decay of human interest in creative work? Hardly. Because, outside the office and the factory, men and women spend hours in performing tasks in which they have a vital interest. A noted industrialist has remarked, "The workman who will loaf with consummate skill during the day may, at night, work very hard upon a doll's house for his little girl, lavishing upon it all the tender care of craftsmanship. He has no interest in his daily task, but he has a deep interest in the home job that he has set for himself. Is this the fault of the man or the job? Why should he be interested in the one task and not the other? Both are work and the second will not bring the slightest financial reward."[1] He ventures the answer now commonly given to this pertinent inquiry, namely, that in the factory job the worker probably does not know what he is doing but is simply going through a monotonous routine. An employee has little idea of the value of the thing he is doing or its relation to the final product. His responsibility ends with the performance of his limited task. In the planning of the work he has no more to say than the tool he uses or the machine he operates. Why should he be interested? How could he be interested? Making the doll's house is a different matter. There he plans the work, pays the cost, controls the job, and feels the emotional drive of creative workmanship.

Does not all this suggest that the modern business and industrial executive may have given so much attention to perfecting the machine and the technique of production that he has disregarded the human factor? He has made machines so accurate that human dexterity is incapable of performing work with such precision and perfection and so automatic as to require only a minimum of human direction and skill. Perhaps the employer's indifference to the human factor is a consequence of the fact that he has been so engrossed in the task of creating an efficient organization to express his own individuality that he has entirely overlooked the fact that his workers covet the same opportunity for self-expression. Only recently has he awakened to the fact that machines will not operate themselves and that, no matter how mechanically perfect they may be, they will not turn out a perfect product unless fed with the right material, kept in order, operated correctly and at proper speed. It is becoming more apparent that an interested, loyal workman means a properly operated machine—a result reflected in the reduction of idle machine hours, lower repair costs, and lessened spoilage of materials. Work ceases to be burdensome, and even repetitive operations lose much of their monotony when the worker develops an intelligent and conscious interest in what he is doing and is given a measure of control over the machine.

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[1] BASSET, W. R., "Guiding the Creative Instinct," *Factory*, vol. 22, March, 1919, p. 450.

Stimulation of Interest a Problem of Good Management.—A considerable number of executives have recognized the soundness of the conclusion advanced by industrial psychologists, namely, that one of the most fundamental and, at the same time, most difficult steps in successful management is to quicken the interest and release the productive energy of the vast number of men and women in industry who are now withholding their best efforts. The efficiency of any organization will never exceed the limits prescribed by the intelligence, interest, cooperativeness, and creative work of the men and women in the rank and file. These qualities will not assume desirable proportions so long as the average worker looks upon his day's work as a treadmill of drudgery, a task which must be completed somehow and anyhow, and focuses his attention constantly on the hour of "knocking off."

The problem is difficult to solve because mechanization and specialization are increasing, and because the process of concentration and integration in the business and industrial organization is accentuating the impersonality which was introduced by the advent of large-scale production. It is not possible to escape from the machine-production division of labor and standardization which characterize modern industry. These are essential to economy and efficiency. Without them, the increasing number and variety of human wants could not be met. It is an inescapable fact, worthy of frequent repetition because of the modern "complex" against the machine, that mechanization has resulted in an enormous increase in output and brought within reach of the worker comforts and luxuries which yesterday were the portion only of the rich. Recognition of these conspicuous advantages of mechanization and scientific management, however, does not justify indifference to those consequences which are essentially detrimental. The fact remains that these benefits have been purchased at a considerable price, and there are not a few people who question whether the results have been worth their cost. For it is still true that "we cannot get greater enjoyment out of life by simply increasing our possessions, but only by increasing our capacity for self-expression. Greater expression means manifestation of greater life and therefore a fuller realization of individual capacity, which, after all, is what we are striving for."[1]

There are only two ways out of the dilemma. Management can accept disinterestedness as a by-product of human nature and as inevitable under modern, mechanized, impersonal industry. It may refuse to do anything at all except to increase the supervision, time the machine, and speed up the treadmill in order to guarantee efficiency. Or, management can recognize the true causal relation that exists between creative interest and creative work and, so, put forth every effort to recover the wholehearted cooperation of employees in the responsibilities of production. The latter is certainly the better method of procedure, whether measured in terms of industrial efficiency or in the larger terms of social progress.

General Interests.—The fundamental basis of interest in any particular task is to be found in the direction of general interests possessed by the worker. No matter how strong the incentive, the man who is able fully to appreciate fine symphony music is very likely always to continue to be an inefficient and disinterested steel riveter. The worker who has a general interest in mechanics is unlikely to be interested and happy at routine work in the office, especially if there is no chance for self-expression along mechanical lines. That the workers' interests differ greatly with different occupations is evidenced by a study of a comparison between the interests of salesmen and those of a number of other occupational groups. It was discovered in this study that the correlation between interests of life insurance salesmen and real estate salesmen was very high, but that there was a high inverse correlation between the interests of life insurance salesmen, on the one hand, and those of mathematicians or chemists, on the other, thus indicating practically opposite general interests.[2] Other comparisons are made by correlating the general interests of successful life insurance salesmen to:

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[1] WOLF, R. B., "Making Men Like Their Jobs," *System*, vol. 35, January, 1919, p. 35.

[2] STRONG, E. K., JR., "Interests and Sales Ability," *Personnel Journal*, vol. 13, December, 1934, p. 210.

Occupation	Correlation	Occupation	Correlation
Real estate salesman	0.85	Accountant	0.08
Vacuum-cleaner salesman	0.59	Minister	0.04
Advertising man	0.43	Teacher	−0.23
Y.M.C.A. general secretary	0.38	Artist	−0.44
Office man	0.32	Physician	−0.61
Lawyer	0.31	Mathematician	−0.78
Personnel manager	0.26	Chemist	−0.88

This is further indication of the importance of proper selection and placement, for without a suitable background stimulation of the worker's interest in any particular job is bound to be almost impossible.

Maintaining Interest through Financial Bonuses.—Efforts to create interest assume the form of bonuses, premiums, or similar devices calculated to stimulate more persistent productivity. These devices are often successful. Frequently, however, their results are only temporary, because the cash nexus fails to conduce to sustained interest and cooperation. The workers come to view such payments as a matter of course, so some new stimulus has to be discovered. If incentives fail, the old antagonism and conflict reappear, the employer proceeds to denounce the faithlessness and disloyalty of the employees, and the employees in turn condemn the unfairness of the employer.

Workers must have some interest in their jobs apart from the financial return—something akin to the old pride in craftsmanship. Any program designed to stimulate interest in work must be accompanied by an honest plan for giving the workers a real voice in the government of the shop, control of the job, and determination of all those conditions which directly and vitally affect their own interests. Creative interest in work is also inseparably related to persistent emphasis upon quality rather than quantity production. Because income is so indispensable to the acquisition of the necessities and comforts of life, every worker, is, of course, vitally interested in the contents of the pay envelope and consequently in the scale of wages. Since the length of the working shift and the physical conditions of employment are so intimately related to his physical and mental well-being and to the amount of leisure time he will have outside the plant, the workman is no less interested in desirable standards of hours and conditions of employment. But these are not adequate in themselves to assure the spirit of cooperativeness. A goodly measure of humanized control is essential. The interested and loyal worker cannot continue as such and be treated as an impersonal machine tender or automatic stenographer.

Every effort must be made to provide escape from the deadening routine and monotony of task performance. The worker must be taken into the confidence of management; he must be shown the reasons for shop rules and regulations which so often are a source of irritation. The organization and operation of the whole plant must be described in order that he may see his relation to it and his part in it. The relation of his particular job to other jobs and to the whole organization must be made clear to him in order that he may understand his responsibility to his fellow workmen and to the management and thus realize how carelessness and inefficiency on his part may have disastrous results for them. Finally, he must be shown the relation of his job to the finished product and its importance to the ultimate consumer. All this calls for a definite technique.

Use of Production and Cost Records.—A considerable proportion of conscious and unconscious inefficiency can be attributed to ignorance on the part of the workers and foremen concerning the cost of materials, equipment, and machines. Convinced that foremen and wage earners would become more economical and efficient if they were once made familiar with the fundamental meaning and purpose of what they were doing and knew the cost of the materials and equipment used by them, many employers have adopted the plan of disseminating facts concerning these matters.

When the foremen in a certain plant were given a sheet showing the cost of supplies consumed each month by their departments, they immediately cut down the amount. Things had been wasted because no one knew what they were worth. In another plant, repair charges formed a considerable part of the overhead, largely because repairs were done leisurely and were an occasion for loafing. When, by means of a monthly cost sheet, each foreman was shown how wasted time was increasing the overhead burden of his department, repair bills were sliced in half. In some instances, daily cost sheets on work have been distributed among foremen, together with a comparison of present and previous costs. When these data are presented in the form of interesting graphs, workers likewise tend to become extremely curious about the movement of cost curves. The management of a large plant, confronted with the problem of reducing supplies taken from the storerooms for maintenance and repairs, found it possible to stimulate interest in economy by placing at the storeroom window a list of current prices. A weekly bulletin stated the cost of the supplies used by each man or group for the current week, together with a comparison of the cost record for preceding weeks.[1] But these records are still far too infrequently used in present-day organization. It has been said that only 3 per cent of the employees involved are informed of the results of studies designed to cut costs to a minimum.[2]

Some companies have discovered that lack of interest in work and economy is often the result of the failure to place definite responsibility upon wage earners. In one mill, it was found that spinning jennies were idle as much as 15 per cent of the time because the whole responsibility for the operation of the department was placed upon the shoulders of the foreman who was so burdened with other duties that he neglected to keep the automatic stops in repair. When the company made the operators responsible for putting and keeping the machines in repair, idle time was decreased 7 per cent, and output was increased 8 per cent, not to mention the saving which resulted from the lessened number of "rejects" on goods. In a factory which manufactures automobile parts, the idle hours on certain machines amounted to 36 per cent of the total. These machines were the "neck of the bottle" in the scheme of production, so their idleness slowed up the whole plant. Here, also, lack of interest and knowledge on the part of the workers was the important factor, and these in turn resulted from failure to give the workers responsibility for repairs.[3] In the General Foods Corporation (New York office), greater responsibility has been placed upon the office workers by reducing their supervision to a minimum and by doing away with the time check and emphasizing the importance of completing the task instead.[4]

A blackboard has been used at times with remarkable effect to create interest in production and to stimulate pride in the company. Charts may be used to indicate the trend of output, costs, wages, and wastes. In one instance, a chart showed two graphic curves indicating the monthly production of the factory and that of the entire neighboring industrial region. The purpose of this chart was to show the workmen in the plant in which it was used the importance of the organization in comparison with other factories in the district. It also made clear to each workman the position of the firm as a leader in its particular field, thus stimulating pride in the company. In another case, a more ambitious attempt was made of showing the yearly growth of the factory's output and its foreign connections.

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[1] Basset, W. R., "Developing Pride and Interest in the Job," *Factory*, vol. 22, April, 1919, p. 696.

[2] Frank, T. B., "Man on the Job Needs Data," *Iron Age*, vol. 25, June 26, 1930, p. 1879.

[3] Basset, W. R., *op. cit.*, p. 450.

[4] Jansen, Harold E., "Developing Employee Initiative," *System*, vol. 57, May, 1930, p. 422.

Contests as a Means of Increasing Production and Curbing Costs.—What has just been said concerning the use of charts in stimulating interest and output and reducing costs warrants the conclusion that psychology is good currency in modern industry. Many believe that the problem of efficient production is a psychological rather than an economic one. To the industrial psychologist, well trained in his science and sensing the correlation between psychic forces and economic efficiency, industry owes much for the successful releasing of creative energy among the workers.

The harnessing of psychic forces has been accomplished by means of contests calculated to stimulate interest, increase output, and decrease costs. Here the spirit of competition and rivalry, which so frequently finds emotional outlet in violence and destructive action, has been sublimated. The inborn spirit of curiosity has been quickened into new life. Any activity that makes for harmonious, cooperative effort throughout the plant must inevitably react favorably upon the morale of the industrial family.

Perhaps there is no better example of the successful use of contests than that which was put into operation by the General Electric Company in its lamp works some years ago. The company held several annual contests in its lamp factories throughout the United States and found that production records which were seemingly impossible under the unmodified monotony of ordinary conditions were accomplished with apparent ease in a contest. Although 75 per cent of the employees were women, the results indicated that the contest was equally effective among men and women, the resultant stimulation of interest, improvement of morale, and reduction of labor turnover applying proportionately to both sexes.

The company found it necessary to vary the nature of the contest each year. In one year, the principal objective was the reduction of spoilage. Shrinkage due to spoilage during manufacture is an important factor in operating costs in the lamp industry, which uses delicate glass and expensive metal parts. An effort was made to reduce the amount of spoilage through the means of an "indoor baseball series." Each factory represented a team and was given a distinctive name, as the Giants or the White Sox. The idea was carried down through the various units of each factory. Scores were reported by telegraph, and the factory reporting the lowest percentage of rejected bulbs was declared the winner on that particular day. The winner of the series was the plant which, at the end of the contest, had the lowest percentage of rejects. Other varieties of contests were used with equal success to achieve reduction in labor turnover, improvement in attendance, and a leveling up of morale. In each case, success was dependent upon the willingness and enthusiasm with which the plant executives, including foremen, entered into the spirit of the scheme.[1]

Contests may be interfactory, interdepartmental, or intradepartmental, depending upon the organization of the company and the problems and objectives involved. The spirit of rivalry, so prominent in athletic contests, is capitalized. Each contest is planned and executed around a central purpose. The fundamental purpose will invariably depend upon time and circumstances. A type of contest which would be highly successful in a period of high production might not be at all adapted to slack times, and vice versa.

During the recovery period of 1934–1935, a large Western bakery company built contest blackboards on the walls of the general sales offices where weekly sales meetings were held. Each week sales scores were posted and effigies of the ten leading salesmen were hung from the ceiling in front of the score boards. Substantial cash prizes were offered for those leading in dollar sales volume during the contest period. For the ten highest, the competitive position of each was represented in effigy form by adding to their respective effigies pieces of clothing, first a shirt, then trousers, then socks and shoes, et cetera, toward the making up of full tuxedo dress. When the goal was reached the contest was ended, and a banquet of all sales persons was held. The ten leading salespersons were required to attend this gathering in dress corresponding to that of their effigies at the time the contest ended in order to collect their cash prizes. This was an occasion for a celebration among the employees. The contest proved to be so effective in stimulating interest and production at a time when competition was becoming a serious menace to the company that this scheme, modified from year to year, has become an annual affair among the company's sales force.

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[1] SCOTT, ROSCOE, "How Contests Have Helped Us Curb Costs," *Factory*, vol. 29, July, 1922, pp. 17–20.

If employment is scarce and labor plentiful, there is a natural competitive increase in efficiency among those who are fortunate enough to have jobs. During such times little stimulus to efficiency is needed, and contests are not so necessary or effective, except in the trades where there is a conspicuous tendency to make the job last. It is in periods of labor scarcity that the technique of contests can be used most effectively. Expenditures for contests must be governed by existing conditions. The experience of concerns that have tried the contest idea indicates that the results are not necessarily in direct proportion to financial outlay. Indeed, an inverse ratio sometimes appears. The length of the contest is an important consideration. Experience shows that to be successful they should not run less than one month and not longer than three. Shorter contests do not warrant the expense and time which careful planning require, and longer ones tend to drag and fail.

Sharing of Information.—The president of a successful business firm once remarked that the growth of a business must come principally from within—from the individual growth of executives and workers—supplemented by a good product and real service to the consumer. In order to maintain the position it had gained, his company found it necessary to make the entire business understandable to all the people in the organization. The specific aims of this firm were to give each workman a clear idea of what the business was all about, the particular part he played in the entire program of production, the things he could do to better himself in the organization, the possibilities of promotion and advancement which service in the company implied, and the correlation between various divisions of the enterprise. And an effort was made to impress the workers with the vastness and complexity of the enterprise.

Every company faces, to a greater or less degree, the problem of disseminating information among its employees. Major and minor executives, sales representatives, office force, factory workers, and all other individuals in the service of the company must be reached by a systematic giving of information if there is to be developed that interest in work and the enterprise that inevitably creates a "my job" and "my company" spirit. The function of imparting information, which will lift the individual out of the confines of his own particular job and enable him to visualize the organization of well-balanced activities, is essentially educational in nature. The following detailed list has been suggested:

The history of the company.
The financial position of the company.
Principles of organization, showing the interrelation between the various divisions and groups involved.
The position of the company with reference to other enterprises in the same field.
Sources of raw materials used by the company.
State of raw materials as they arrive at the plant.
Characteristic processes in the plant.
Methods of transportation in and between separated branches of the company.
The use of machinery and its effect upon the quantity and quality of the products.
The development of new machinery and methods.
The part played by suggestions from employees.
Plant laboratories and the testing of raw materials and materials in process.
The control of the quality of a product through inspection and special tests with the finished article.
The packing and distributing of the product.
The various uses to which the product is put.
The salesman and his relation to the consuming public and the home organization.
The advertising methods of the company.[1]

Since the creation of an intelligent appreciation and the stimulation of cooperation on the part of all individuals in the service of the organization are the principal aims of the dissemination of such facts as are here enumerated, publicity rather than formal educational methods are generally used in business. A more intensive educational program is necessary where the purpose is to increase the efficiency of specific individuals or groups. Three principal sets of methods have been successfully used in American enterprises to distribute information among employees.

Oral methods:
1. Conferences.
2. Club meetings.
3. Mass meetings.
4. Committee meetings.
5. Individual messages.

Written methods:
1. Plant magazines or papers.
2. Bulletin boards.
3. Booklets and manuals.
4. Bulletins, circular letters, or memoranda.
5. Pay envelopes.

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[1] LINK, H. C., "The Creation of Interest and Good-Will Through General Education in Industry: The Responsibility of Industry," *Administration*, vol. 3, March, 1922, p. 335.

  6. The company library.

Miscellaneous methods:

  1. Motion pictures.
  2. Inspection trips.
  3. Special methods.

Oral methods are often preferred to written methods because they make possible a more direct and personal presentation of data and prevent much of the misunderstanding which develops from the impersonal printed page. A system of conferences, which permits questions and explanations and affords personal contacts, is a popular oral method. Daily or less frequent conferences of executives, foremen, and representatives of employees are scheduled, at which information concerning costs, distribution of overhead, production, spoilage, and similar items are discussed. Perhaps the chief objection to the conference method is its large consumption of time, but the time spent in well-planned and properly guided conferences will usually more than pay for itself in increased economy of operation and improved methods of production. Clubs may be used for disseminating information. The primary function of clubs, however, is social, and they cannot be looked upon as generally adaptable to the business of presenting company information.

There is little doubt that the employees' mass meeting, supplemented by smaller group meetings, is of more importance than the preceding methods. The time and frequency of such gatherings of employees vary with the company. Some hold rallies or mass meetings about once a month from 8:30 to 9:00 P.M.; others conduct semimonthly meetings on company time at the end of the business day. The information presented at such gatherings is invariably a mixture of organizational, educational, and inspirational data. Considerable harm has sometimes accrued from employees' mass meetings, particularly when they have been conducted in a haphazard manner without any preparation or planning and without any well-defined objective or have been placed in charge of outside religious, political, or social organizations whose speakers made statements that offended certain groups of the workers. Of doubtful expediency is the practice of permitting meetings by outsiders who have special axes to grind and who make it their business to spread cheap propaganda. Not even the company itself should use employees' meetings for the ordinary purposes of propaganda.

A workable technique for employees' mass meetings is of fundamental importance, and includes not only a carefully prearranged program but able leadership and dexterous guidance. When under the direction of an expert leader of discussion groups, open forum meetings are sometimes used to advantage because they permit free discussion and are stimulating. Such meetings, however, present almost insuperable difficulties, both from an educational and a practical standpoint. Their usefulness is limited to very small groups, because the response of large groups is usually weak and comes chiefly from inveterate talkers. Moreover, it is almost impossible to carry out a systematic program of education in miscellaneous group meetings.

Committee meetings have assumed a major role in the dissemination of information since employee representation schemes have become a permanent part of the mechanism of management in so many companies. Many employers recognize the practical possibilities of shop committees of elected representatives of employees, whose chief function it has been to establish a closer relationship between management and men. The last decade has witnessed a remarkable growth in representation plans, practically all of which provide for separate committees of employees' representatives or joint committees of management and workers' representatives, with further provision for special joint meetings.

These representative groups consider questions of interest to management and men: questions of policy, production, expansion, costs, wastes, grievances, and discipline. Often committees serve as workers' representatives who interpret to the workers throughout the organization the significance of production and cost records compiled by the management. The Hamilton Manufacturing Company, for instance, has disseminated information through a shop committee since 1919. The committee has used graphic charts which show labor, supplies, defective work expenses, and similar costs of the company by various departments. Before the end of the first year of the plan, the overall controllable costs were cut 50 per cent, and by the end of the second year this figure was halved again.[1]

Committee meetings, whether separate or joint, constitute an effective medium through which to transmit the thoughts, feelings, and requests of employees to management and the wishes of management to the men. The men are thus given an insight into the problems of management, and management has revealed to it the problems and aspirations of the workers. By the use of charts and statistical data, particular problems are analyzed and visualized in an effective manner. Through these committees employees submit recommendations on various matters of interest to them, and these are frequently accepted, provided they do not conflict with general policy, involve too radical changes in methods of operation, or are not too expensive.

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[1] SUDDARD, I. W., "Sharing Information with Employees," *Manufacturing Industries*, vol. 15, February, 1928, pp. 91–94.

It is a universal practice in American industry to use the departmental system of giving information to employees. Individual messages are conveyed in this way. Heads of departments or foremen are given instructions with the understanding that they will relay the information to their men. Personal conferences are also generally used for imparting to individual employees such information as is of special interest to them. A few years ago, an Eastern company received an order offering only a narrow margin of profit. All foremen and subforemen were called in and told the circumstances. An appeal was then made directly to the men to help keep costs at a minimum, and in this way the order was successfully filled.[1]

The foreman or departmental supervisor has a real responsibility to perform in building up the workers' interest. Besides looking after the physical environment of those he supervises, he must explain to the worker how to earn more and how the paycheck is figured, encourage the worker when less work or pay is offered, advise how progress can be made, point out the company's prospects for future business, and assist the worker in developing pride in his own workmanship. He must bring new ideas into the department for the purpose of revising or maintaining interest and serve as general interpreter of the company's policies. It is his task to build up a spirit of cooperation and loyalty.[2]

Written Methods.—Every American firm uses one or another of the written methods of imparting information to employees. The company magazine offers an excellent opportunity for frank discussions of company problems with the workers. The employee publication of the Nash-Kelvinator Corporation, for instance, has developed into a medium whereby employees are informed concerning manufacturing plans and the competitive position of the company in the industry.[3] Through the house organ of the Ludlum

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[1] See particularly, J. A. Buxton, "The Foreman's Job Getting and Holding the Workers' Interest," *India Rubber World*, vol. 92, August, 1935, pp. 39–41.

[2] Kauffman, Alfred, "Give the Facts and Get Cooperation," *Manufacturing Industries*, vol. 16, May, 1928, pp. 21–23.

[3] Pollard, G. V., "Let's Tell the Employees," *Factory Management and Maintenance*, vol. 94, June, 1936, pp. 206–207.

Steel Company, the president talks frankly about the company's progress, showing that the company has some 40 competitors ready to take business lost by carelessness and broken sales promises. The 1934 business report which was published in this organ made plain to the workers straightforward answers to such questions as: Is the company showing a profit? Where do profits go? How does the future of the company look?[1] When perhaps two-thirds of those released from industry "do not care" when they are discharged, these frank talks cannot help but improve the morale and sharpen the interest of the worker in performing the work that brings him his livelihood.[2]

The bulletin boards are perhaps the most universally used medium. They serve practically the same purposes as the company paper but are even more direct and frequently more effective because their contents are more concise and conspicuous. The bulletin boards aim to give the maximum amount of information to the maximum number in a minimum of time. Here one finds brief but conspicuous notices concerning such matters as hours, holidays, wages, athletic contests, production and economy contests, changes in company policy and procedure, changes in streetcar and train schedules, social events, and educational activities in the plant. Bulletin-board forms vary. A blackboard is sometimes used. Brief notices are sometimes placed on the front of the time clock, especially when the notice is urgent and important. Many companies require that notices on their bulletin boards shall be in poster form, with large letters to assure attention and reading. To be satisfactory, bulletin boards must be placed in strategic locations, must not be allowed to degenerate into catch-alls for irrelevant items, and must not be permitted to become cluttered with notices that are out of date. To insure economical and varied use, it has been suggested that companies should place bulletin-board control in the hands of the plant librarian or some other individual whose business it shall be to index each announcement, together with a definite date for its recall.

Bulletins, circulars, letters, and memoranda are similar in nature and are used effectively. Periodical bulletins are issued for specific purposes, letters are sent out at regular intervals to certain groups of employees and executives, and special reports are circulated throughout the organization. Factory heads sometimes circulate multigraphed sheets containing messages for workmen. Many firms have a mailing list of the home addresses of all their employees, to whom an occasional letter is sent stating the financial position of the company and discussing the business outlook. Occasion is also taken to express the management's appreciation of the work of its employees. Memoranda concerning changes in the routine of work, in forms, or in general policies governing production are sometimes distributed among department heads by the planning department, to be passed on to foremen and employees.

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[1] "Ludlum Steel Company Takes Mystery Out of Business," *Sales Management*, vol. 36, April, 1935, p. 376.

[2] Estimates made by Harvard University Bureau of Vocational Guidance. See *Nation's Business*, September, 1928, pp. 33–34.

Booklets and manuals are given by many companies to new employees as a means of familiarizing them with the nature of the organization and its general policies. The greater familiarity an employee has with the company's history, policies, and progress, the more likely is he to develop interest and loyalty. The chief difficulty with booklets and manuals is the lack of assurance that they will be read. On the other hand, if the information they contain is presented in an interesting manner, such sources of information may be valuable indeed, because they will be read not only by employees but, when taken home, by other members of the family. This stimulates group loyalty and interest.

As a medium of publicity and information, the pay envelope has had general application. Notices and informational and inspirational paragraphs may be printed on small slips and inserted in the pay envelope, or such data may be printed on the back of the envelope itself. This method has the distinct advantage of guaranteeing that the worker will receive it. It is a method, however, which must be used with caution. Self-respecting wage earners object seriously to having the pay envelope used as a medium of publicity and propaganda, and they prefer not to have their inspiration stuffed in alongside their incomes. Mr. Link says:

> The pay envelope represents a purely mechanical business transaction, and as such should be treated with the restraint and dignity which accompanies all other impersonal money transactions. By accompanying the pay envelope with a personal or paternalistic "preachment," the employer is more likely to arouse in the mind of the recipient a sense of the inadequacy of its contents.[1]

Payroll departments sometimes object to informational use of the pay envelope because it involves mechanical difficulties and considerable time and inconvenience. To address and enclose the proper pay requires such close attention that any additional work tends to increase the number and frequency of mistakes. This results in dissatisfaction and necessitates time and effort for adjustments.

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[1] LINK, H. C., *op. cit.*, p. 342.

The development of industrial libraries is one of the promising by-products of company educational movements in the United States. Many of these company libraries have grown from a few uncatalogued books and papers in the main office to well-organized and expertly manned institutions. Sometimes they are located in a spot most convenient to the greatest number of the employees and are some distance from the plant. They are no longer just an accumulation of books, magazines, and newspapers, but they have an active part in the intelligent direction of executive and employee reading. The technical needs of executives are ascertained and their attention called to especially helpful books and magazine articles; the interests of employees and their families are studied with a view to stimulating a wider reading of helpful literature. Either free of charge, or for a small fee, or as incidental to the employees' annual club dues, the families of employees are given use of the library facilities. To promote useful reading, some firms pay half of the subscription cost of technical magazines to which their employees subscribe. Many use their house organs to call attention to current magazine articles of importance, in some instances reproducing them by photostat for limited circulation. The library may also serve as the distributing agency for company bulletins, announcements, manuals, textbooks, and other material for educational courses conducted within the organization.

Load Building Program of the Philadelphia Gas Works Company.—The practical value of interest programs is exemplified by the "Load Building Program" of the Philadelphia Gas Works Company. For many years, this company, serving natural gas to consumers in a large industrial center, was confronted with innumerable engineering problems. Today, however, the picture is reversed, and the chief concern of the company is to build up the consumption of its service in competition with other types of utilities. The chief purpose of this program, therefore, is "to enlist the interest and cooperation of employees in promoting their own and their company's business."[1]

To this end, a special committee was created consisting of five executives appointed by the company president and five persons elected as employee representatives, to serve under the chairman-ship of the president's assistant in selecting subjects for discussion, passing upon texts to be used in the program, and receiving reports of progress and of criticism. The program is administered through regular company line organization, and is considered to be a normal part of each employee's task, so long as added expense is not necessitated.

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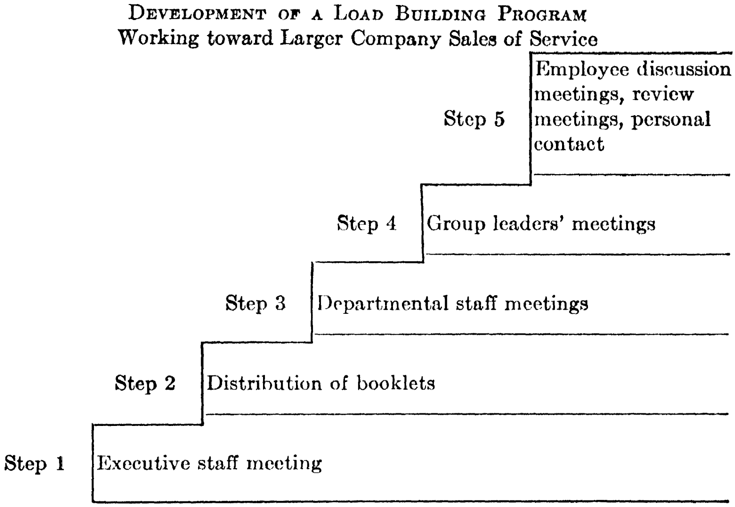
[1] Philadelphia Gas Works Company, *Load Building Program*, Jan. 13, 1936.

There are five steps involved in the stimulation of interest through this plan. Preparatory to the program proper, the Load Building Program Committee selects subjects for discussion. These subjects, relating to the company's sales and service work (such as the factors affecting size of customers' gas bills), are worked into a text draft which is sent to each Load Building Program committeeman, training supervisor, and departmental head. Comments and criticisms are presented, and the booklets are then printed for usage.


DEVELOPMENT OF A LOAD BUILDING PROGRAM
Working toward Larger Company Sales of Service

Step 5
Employee discussion meetings, review meetings, personal contact
Step 4
Group leaders' meetings
Step 3
Departmental staff meetings
Step 2
Distribution of booklets
Step 1
Executive staff meeting

FIG. 22.

The first step in carrying on the program proper, as the above diagram indicates, involves a discussion of each subject, led by the president near the first of each month in conference with his executive staff. Next, every employee receives one of the program booklets, usually through the hands of his immediate supervisor, who informs the employee that the text reading will be supplemented by an open discussion, or by a personal conference with the supervisor. Then the department heads call their respective supervisory staffs together to outline the avenues of further discussion of the topics. This done, the training representative of each department conducts an advance meeting of group leaders to review text material and methods of leadership. Finally, the text assignments are reviewed and supplemented by open discussion, review talks, or personal contact, and the program again reverts to a new subject which is followed through in the same way.

By this simple method, and without appreciable added expense, the company has been able to stimulate widespread interest among employees.

Miscellaneous Methods.—Where it has been found difficult to stimulate interest, loyalty, and efficiency by the usual methods, a number of companies have resorted to certain rather unusual practices. Presentation of information by means of motion pictures has succeeded in holding attention and getting ideas across to practically all employees. Although this is a costly method, unless used in conjunction with the educational program, it gets results because pictures are the universal language understood by all races and nationalities represented in the working force. Even the motion picture method, however, has to be used with precaution if it is to achieve desired results. Experience has proved to industrial concerns that educational films alone will not create and hold interest, but must be supplemented by other varieties of pictures. Large crowds of employees can be drawn to periodical meetings if educational films are used in conjunction with a film that is purely amusing or entertaining in character.

Some companies have used inspection trips to great advantage in stimulating interest, improving efficiency, and developing the "my company" spirit. Employees are conducted through the entire plant in order to give them a conception of the organization as a whole. Occasionally such trips should be delayed until the employees have been with the company for some time, because they then have some intelligent foundation for the additional and more complex items of information that a survey of the plant yields. If such tours are to produce desired effects, preliminary education is necessary through the company paper, employee meetings, motion pictures, and other mediums to prepare the employees for what they are going to see and to show the coordination of the various departments of the plant. The most fruitful inspections are those in which the guide gives a brief preliminary lecture.

Some companies have made the introduction of special policies, such as pension plans, group insurance, and profit-sharing plans, the occasion for presenting important items of information to the workers. The purpose here has been to stimulate interest and cooperation through a more intelligent understanding of the essentials of business organization and the fundamentals of the existing economic system. The introduction of such plans as profit sharing requires considerable preliminary publicity and this offers an admirable opportunity for educational work.

One of the most successful campaigns ever made by an American company for the distribution of stock was that launched by the General Electric Company among its employees. Approximately $20,000,000 worth of a regular stock issue was sold to its own employees. This phenomenal success was in no small measure attributable to the comprehensive and effective educational program carried on through the medium of the plant papers prior to the issuance of stock. The publicity items covered such subjects as the history of the company, its previous financial undertakings, the uses to which the desired capital would be put, the ways and means of accumulating capital, the function of capital in the operation of business, the transformation of labor power into capital goods, the principles of sound investment, the relation between risks and profits, and the significance of the company's financial statement and how to read it intelligently.

Other rather ingenious methods of stimulating interest have been worked out in attempts to meet the peculiar needs of individual organizations. The policy of the El Paso Electric Company is to interest wives of employees in local educational contests under the plan suggested by the American Transit Association designed to promote public relations. Notifications of contests were sent to the homes, and prizes, including home electrical devices, were offered for the best paper on personal appearance, interest, and the like.[1] Hotel companies have arranged for the exchange of positions of employees in order to bring new vitality and interest into the job.[2] The General Electric Company, Royal Typewriter Company, Douglas Aircraft Company, and many others stimulate interest through the maintenance of athletic teams.[3] A large Eastern hosiery company has increased the interest and output of employees by installing a radio broadcasting system within the mill,[1] and another company has installed an individual earphone system so that events under special broadcast can be heard by the workers during regular hours.[2]

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[1] Ricks, E. C., "Arousing Employee Interest," *Mass Transportation*, vol. 31, August, 1935, p. 239.

[2] Painter, V. S., "Eleven Ways to Encourage Employees to Give Their Best," *Hotel Management*, vol. 19, March, 1931, pp. 185–188.

[3] "Are Company Athletic Teams Worth While?" *Printers Ink*, vol. 152, Sept. 25, 1930, pp. 89–90.

Millions of dollars have been spent on advertising films, posters, booklets, and charts for the express purpose of soliciting the good will of the consuming public; but only in a few cases have American corporations discovered the immeasurable service which the use of these will render among employees. Such materials enable the employees to visualize the company's and their own relationship to the folks who buy the products and services of the enterprise. This tends to increase the quantity and improve the quality of production.

The Ultimate Effects.—Creation of interest in the job and the company with its resultant cooperation, efficiency, and loyalty is a difficult task and the results of educational and publicity campaigns often seem extremely intangible. Yet, if there is any agreement among American concerns relative to the effectiveness of personnel technique, it is with regard to the beneficial results accruing from the dissemination of information among executives and the rank and file of employees. The interest of the employee in his work, his company, and his fellows has been definitely stimulated. An intelligent understanding of the difficulties of scientific management and the true status of the industry and the company has been promoted, thus eliminating many false and exaggerated ideas and notions harbored by employees. A broader understanding of the job and the industry has frequently proved an incentive to ambition and has encouraged men to develop their potential inventiveness in improving processes. Quantity and quality production have been improved with monetary advantages to the employee, increased earnings for the company, and more and better goods for the consumer. Finally, publicity campaigns, which have enabled the employee to visualize the productive and distributive phases of industry, have resulted in a deeper appreciation of the relation of the job and industry to the ultimate consumer.

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[1] "Radio Entertainment Improves Workers' Efficiency in Hosiery Plant," *Textile World*, vol. 83, June, 1933, p. 1103.

[2] "Baseball Game Leads to Increased Production," *Factory and Industrial Management*, vol. 77, January, 1929, p. 63.

CHAPTER XVI

TRANSFER, PROMOTION, AND DISMISSAL

Definitions.—A program calculated to stabilize the working force, create interest, and cultivate loyalty to the organization is obviously incomplete without a definite system of transfers, a well-defined plan of promotions, and an intelligent supervision of dismissals. *Transfer* is usually regarded as the shifting of an employee from one task or position to another within the organization which does not involve a change in the degree of skill; *promotion* refers to the placement of an employee in work requiring a higher degree of skill or more responsibility than was required by the former position. A change in wage rate need not necessarily accompany a transfer or promotion since a monetary reward for better service can be classified as an "advance in pay." In common practice, however, wage increases are regarded as a form of promotion.

It is well to bear in mind the essential distinction between transfer, promotion, and discharge. In the case of a *transfer*, the shift is more or less lateral, that is, the worker is moved to a position requiring a degree of ability and responsibility similar to that exacted by his former position. A *promotion* implies vertical advancement to a position which requires a greater degree of skill and experience or imposes heavier responsibilities, and is likely to pay a higher wage or salary. *Discharge* implies compulsory termination of the employment relation on account of an alleged or known infraction of plant rules, insubordination, incompetency, or some other cause.[1] Dismissal is not to be confused with a layoff caused by lack of work and the necessity for reduced operating expenses usually brought on by seasonal and cyclical fluctuations in business activity.

Causes Leading to Transfer.—There are numerous reasons why it may be desirable to change an employee from one position to another in the same organization. Sometimes, it is necessary to correct an erroneous placement. Regardless of the care exercised by the employment department in selecting and placing employees, conscientious workers are frequently assigned to positions for which they are inadequately qualified or in which they find it difficult to cultivate and sustain a creative interest. This situation may arise through error in the judgment of the individual who hired and placed the worker; it may be the result of conscious and willful misrepresentation by the employee himself at the time of the original interview and application. Or it may be attributable to overconfidence on the part of the worker with regard to his ability to fill the position successfully. Whatever the cause, he is a square peg in a round hole. There are many of his kind in every organization. Fair play requires that the company assume the responsibility of giving a new opportunity to employees who have performed their tasks conscientiously, but have failed in a particular job on account of lack of ability to do it well or because of an absence of interest in it. In another position the worker may prove unusually competent.

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[1] The United States Department of Labor defines discharge as "a termination of employment at the will of the employer, with prejudice to the worker because of some fault on the part of the worker." (*Monthly Labor Review*, vol. 43, December, 1936, p. 1486.)

Another circumstance which may make a transfer necessary is the monotony that characterizes so many jobs in modern enterprise. In the interest of efficiency and good will, it may be imperative that the worker be given relief from the mental strain incident to the deadening sameness of the operation and the stifling influence of daily routine, whether these appear in the office or the factory. Standardization, systematization, and the automatic machine conduce to elimination of wasted effort, economy of materials and equipment, and large-scale production; they also present a tedium that issues in drab monotony, loss of interest, lessened personal efficiency, and cumulative discontent. In these latter effects transfers often find their *raison d'être*. The importance of transfer in repetitive operations is recognized by a prominent employer who asserted that he never let a job become monotonous to any worker if he could help it; that as soon as he discovered a lag in interest and a loss of efficiency he made an investigation and transferred the employee to another position if that was deemed necessary and expedient.

A reason for transfer may be found in the necessity of providing creative opportunity. It is common knowledge that normal human beings do not perform well the tasks for which they are not qualified or in which they are not interested. Although not so generally recognized, a no less significant fact is that men and women may lose interest in work which once was decidedly attractive to them and in the performance of which they took delight. The essentially monotonous job is not here under consideration; reference is made to work which by its very nature is creative. No matter how creative the task, interest in it and zest for it over extended periods are difficult to sustain, and even the conscientious worker tends to lose the "drive" which he once manifested. This may be due to physiological changes in the individual. Creative work is not so general as advanced age approaches. But often the loss of interest and the accumulation of dissatisfaction with one's work is the result not so much of diminished physical and mental vitality as of the continual performance of the same task. As a change of climate may conduce to physical health and a change of environment to mental happiness, so a change of jobs frequently quickens interest, creates new vitality, and increases efficiency on the part of the worker.

Transfer may be necessary in the interest of the health or age of the worker. On account of constitutional weakness or the disease-producing character of the work itself, it may be imperative to transfer an employee to another position. The existence of occupational diseases requires that constant attention be given to the matter of transfers in those occupations and industries which present hazards to health. Owing to injury or advancing age when an employee is unable to perform customary tasks, he may be transferred to the rehabilitation department or to some other department where he is assigned a job in keeping with his ability. Periodic physical examination is prerequisite to a workable system of transfers in such cases.

"Blind alley" jobs, into which both youthful and mature employees almost unthinkingly fall, may explain the need for transfer in many cases. Such positions offer no promise for the future, either in the form of increased wages or greater opportunity to rise in the scale of responsibility. In common justice, employees who manifest normal or unusual ability should be transferred to more promising jobs.

Transfer may be necessary because of a decrease in work in certain departments of the same plant or in particular plants of the same company. Seasonal and cyclical fluctuations in business, or a falling off in orders arising from other causes may be responsible for the laying off of employees by certain departments or plants. In order to conserve the skill, experience, and training of old employees whose separation from the service of the company would result in considerable financial loss, it is now regarded as a judicious policy to transfer them wherever possible. Often such transfers to part-time or contingent forces avoid long layoffs or permanent discharge. Even though some trouble and expense may be entailed, maintenance is far better than termination of the employment relation in the case of deserving and competent employees.

Transfers are sometimes advisable in preparation for advancement or promotion. Many commercial banks, for instance, have a systematic plan of transferring promising young employees from department to department as a part of their program for training future executives. Sometimes transfer is made in preparation of promotion without the thought of junior executive training, but only for the purpose of giving the employee an opportunity to gain certain detailed experience within one or a few chosen departments of the organization.

In recent years, many companies have adopted the policy of transferring key employees in order to train them for several jobs so that, in cases of absenteeism, tardiness, or emergency, the basic tasks throughout the organization can be performed with only a

TABLE 7.—EMPLOYEES TRANSFERRED ACCORDING TO YEAR OF SERVICE WITH A LARGE MANUFACTURING COMPANY[1]

Year	Male	Female	Total	Percentage of number on payroll	Total number on payroll
Fourth	365	491	856	34	2,498
Third	236	369	605	28	2,105
Second	264	580	844	45	1,855
First	213	207	420	22	1,918

REASONS FOR TRANSFERS IN PERCENTAGE OF TOTAL EACH YEAR

	4th year	3d year	2d year	1st year
Advancing employees	24	19	15	38
Employees preferred other work	10	7	10	11
No work in original department	7	8	23	6
Unadapted	5	7	6	15
Needed in other department	10	45	28	16
Training	31	(Specific department for training established.)		
Miscellaneous	14	13	18	13
Total	100	100	100	100

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[1] MEINE, F. J., "Transfer for Factory Production Employees," *Personnel Journal*, vol. 6, February, 1928, pp. 367–378.

minimum of decreased efficiency. In this way, greater flexibility is obtained in the maintenance of the basic working force.

A final reason for transfers may be found in the personal equation. Not infrequently, discordant relations develop between department heads and their workers. Often there is conflict between the workers themselves, either on account of difference in race, religious beliefs, political views, and economic ideas, or because of the existence of nepotism, favoritism, and discrimination based upon the foregoing or some other equally irrational prejudice. In the interest of plant harmony and efficiency it is well that under such circumstances particular workers be transferred to other departments. The importance of the transfer problem can be seen in an analysis of the transfers taking place in a large manufacturing plant, as indicated in Table 7.

Why Promotions Are Necessary.—One of the most important problems of modern management is to interest employees both in the positions which they are now holding and in those positions to which the present ones are the stepping stones. Recent years have witnessed a widespread recognition of the relation of promotion to the solution of this problem. Promotional plans are now seen in their twofold significance; namely, as a just reward for performance in present positions, and as a source of potential rewards in the future. When actually granted, promotion functions as a recognition and compensation for past performance; as an established phase of the managerial practice, it functions as an index to possible future growth and achievement. From the standpoint of the employer, promotions have value because of their influence upon the general attitude and reaction of the working force; from the point of view of the workers, promotions have significance on account of their relation to a just reward for faithful and proficient service.

Promotions are inseparably connected with efficient management. This is true for several reasons. It is practically impossible to maintain a contented and cooperative working force unless there exists in the organization a definite policy of recognizing meritorious service and special ability. Employees can scarcely be expected to be happy in a situation which offers no opportunity for growth, development, advancement, and increased compensation. Promotions are essential in furnishing an effective incentive to initiative, enterprise, and ambition. Divorced from a share in the ownership of the industry in which they work, as most modern wage earners are, it is difficult for the average workman to become enthusiastic over improved methods of production and increased output. Unless there is more than a haphazard system of recognizing merit, the worker's interest in industrial and business efficiency and in self-government can hardly be expected to grow. Why increase output if he is not in some way to share in the consequent greater profit? Why improve his trade, business, or professional knowledge, if there is to be no opportunity for greater responsibility? Why be curious about improving present methods and processes of work if there is to be no recognition for this exceptional service? Thus the modern worker reasons, and his reasoning is indicative of the necessity for a promotional plan. To the ambitious workman promotional opportunities are as important as the rate of wages.

Promotions are necessary, moreover, as a means of conserving proved skill, training, and ability. Workers will hardly remain loyal to a firm that makes no provision for the rewarding of faithful and competent service and offers no opportunity for the wider exercise of exceptional ability. Under such conditions, they tend to move about in search of desired opportunities, and the percentage of turnover in an establishment which provides none of these advantages is unusually high. Then, too, a definite system of promotions leads to a spirit of conservatism. It is obvious that the absence of opportunities for advancement in rank and pay, which are the normal manifestations of recognition of true worth, tends to increase discontent and general unrest among the workers. Nothing has created revolt against the existing economic order so much as has the conviction on the part of the wage-earner that in business there exists no necessary correlation between work and income, between merit and recognition. Corporations frequently find that the radical in the shop who possesses unusual powers of leadership may be converted into a cooperative employee by promotion to a position of responsibility. As an antidote for unrest, a promotional plan has considerable merit; it has far greater merit than has the customary American policy of forceful suppression and espionage.

The effects of a properly devised and impartially administered plan of promotion are far-reaching. It determines the success with which suitable and competent workers are attracted to the service of the company, and defines the limits of success in holding employees. A promotional plan affects the interest and efforts of employees in systems of training and self-improvement, and determines in a large measure the amount of good will and enthusiasm which prevail in the organization. The maintenance of discipline and standards of work is made easier, and the worker's general attitude toward the present order of things is constructively influenced by such recognition of merit.

Some Preliminary Steps.—Transfers and promotions cannot be successfully effected in a haphazard manner; a definite plan must be formulated and maintained. There must be analysis and classification of positions and compilation and maintenance of an eligibility list. A complete and scientifically determined scale of wages and salaries for all occupations and positions in the organization is necessary. There should be definite rules governing transfer and a clear definition of the basis for promotions, together with accurate determination of the lines of promotion and strict adherence to these lines. A complete system of individual records is indispensable. Education of employees with regard to the essential features and the importance and limitation of the plan will always prove helpful. Centralized supervision and control of the plan will assure sustained attention to the details of its application.

Job Analysis in Relation to Transfers and Promotions.—It is impossible to conceive a successful scheme of transfer and promotion without complete knowledge of the various positions in the organization. Such knowledge is contingent upon job analysis and specifications. As definitely related to transfer and promotion, job analysis involves a careful study of three elements: namely, the positions from which men may be transferred or promoted; the positions to which men may be transferred or promoted; and the types of ability, skill, training, experience, and personality possessed by those who are to be transferred or promoted. In other words, the problem is one of knowing the requirements of the job and the qualifications of the man. Job analysis and man analysis are involved. All of this calls for standardization of requirements and duties, classification of occupations and positions, and rating of human qualities. A loss in efficiency is experienced for failure to recognize these factors. In a large Eastern gas company, for instance, one young woman was recently transferred from a clerical to a telephone position where she did mediocre work. In talking casually to a member of the personnel department, she remarked that the instrument hurt her ears and impaired her hearing. She had always had a fear of telephoning, but she hesitated to tell her supervisor lest she lose her job. In view of this information, she was returned to her clerical duties.[1] Obviously such incidents would not arise if transfers were made a three-way affair involving the department head, personnel manager, and the workers.

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[1] Vicol, E. A., "Rotation and Transfer of Employees," *American Gas Association Monthly*, vol. 18, December, 1936, p. 448.

Classification of positions involves primarily the grouping of all jobs and occupations having identical or similar requirements in the matter of skill, trade or occupational knowledge, experience, and responsibility. A uniform nomenclature must be applied. Each class of positions may be divided and subdivided into two or more grades according to refinements in their requirements. Such job categories will reveal the possible lines of transfer and promotion, make possible an equitable wage scale, and substitute standardization for chaos. Copies should be in the hands of the employment supervisor, the heads of the various departments, the superintendent, and the general office. All transfers and promotions should be made on the basis of this classification and deviations permitted only in exceptional cases.

The Eligibility List.—In order to assure effective and equitable adjustments in the working force through transfers and promotions, it is necessary that the employment office have up-to-date information concerning each employee in the organization. This may take the form of a card index, loose-leaf folder, or some other effective device. Whatever the system, it is essential that all necessary data concerning each employee shall be available for ready reference. This information will include such items as those ordinarily contained on the application blank; the general and special qualifications of the employee, his education, training, and experience; and his record with the company. As in the case of job analysis, the maintenance of a formal eligibility list is as yet not a widely accepted practice in personnel management. Its value, however, is unmistakable. When vacancies occur in the more responsible positions it is an easy matter to select as candidates those best qualified by experience, training, ability, and performance.

A Proper Scale of Occupational Wage Rates.—A chaotic situation exists in the United States with regard to the rates of pay for various jobs and occupations within individual establishments. Although certain organizations have met this problem through a scientific wage scale, positions requiring the same degree of skill, ability, and experience still pay widely different rates of wages in most organizations. Advances and reductions are often inconsistent, with the result that positions requiring considerable skill and responsibility sometimes pay lower rates than those exacting only a slight degree of skill and little or no responsibility. An effective and equitable system of promotions and transfers is obviously impossible under such conditions. Men will not accept permanent transfer to positions requiring skill and ability equal to that of the old job if the rate of pay is lower, nor will they consider promotion to higher positions if there is not a corresponding financial recognition.

Somewhat related to the matter of proper classification of occupational rates is the practice of periodic revision of wage rates for the whole organization. There are many men who are satisfied to continue in the same position year after year, provided the rate of compensation for that particular job is periodically revised upwards. This change in rate does not necessarily imply either transfer or promotion, but there can be no doubt that such revision in wage rates is a helpful supplement to any plan designed to effect these ends. Some companies make a practice of starting men at a comparatively low rate of wages, on the ground that it is impossible in most cases to determine an equitable wage for the average new worker. This rate is readjusted periodically in accordance with increases in the worker's efficiency. Whether the review and revision of wage rates take place every month or every 6 months, it is a far better plan than the haphazard procedure, so common in American industry, of giving a wage increase only when the workers "kick" and demand it. There should be periodic review of payrolls in order to assure increases for deserving employees and to eliminate discrepancies in pay between similar kinds of work. In modern industry, the nature of jobs is constantly changing, and this calls for readjustments in wage scales. The periodic rating scale form presented in Fig. 9 offers a simple but effective method of carrying out these periodic adjustments.

A Clearly Defined Basis for Transfers.—The introduction of a system of transfers may result in serious difficulties unless definite rules governing such matters are formulated and made known to employees. The knowledge that a transfer can be obtained in the event of disagreement with supervisors may lead to artificial stimulation of antagonism in order to effect one. Foremen also abuse the privilege by forcing the transfer of desirable employees. Again, an employee may seek transfer merely for the sake of change, or to be near a friend or relative. Transfers inevitably mean a loss to a department in cases where exceptionally competent workmen are assigned to another branch of the organization. These are admittedly real dangers but cannot be regarded as insurmountable obstacles to the introduction of a transfer system. It is quite possible to safeguard the plan against such abuses by strict adherence to the principles which should govern transfers. The following principles, for example, may be laid down:

1. The existence of transfer privileges does not abrogate the employer's power of discharge nor is transfer to be considered a substitute for discharge except in special cases the merits of which are to be determined by thorough, impartial investigation.
2. No request for transfer will be given serious consideration which is based upon a mere whim of the employee and has no foundation in common sense, necessity, or honest and well-founded preference.
3. No exceptionally efficient and well-trained workman will be transferred from one department to another unless an equally promising employee is available for the department from which the worker is to be transferred.
4. No foreman's recommendation for transfer will be accepted without careful scrutiny of relations existing between the supervisor and the employee in question.

It is manifestly necessary in this whole matter of transfers to adhere to practical considerations. Care must always be exercised not to undermine the disciplinary authority of foremen and department heads. Breaches of discipline and loss of cooperation on the part of these supervisory executives would result if there were total disregard of their wishes and prerogatives. When an employee requests a transfer, therefore, precaution should be taken to investigate the reasons for his desire, to consult the foreman and department head involved as to the merits of the case, and to ascertain the employee's qualifications and record as contained in the files of the employment department. Decision should not be reached until all concerned have been given an opportunity to consider the matter carefully.

Transfers should never be made unless the employee is promptly informed as to the reasons for a change if the action is not being taken because of the worker's own request. It must be remembered that a transfer system is justified only when it serves to meet the dynamic conditions of employment. Abuses can arise here just as in any other useful method of meeting the needs and protecting the interests of both the organization and the individual. Shifting the worker too frequently or creating bad or discouraging conditions of employment is quite likely to make indifferent and inefficient employees. When transfer is a substitute for discharge, it undermines the morale of the organization and so defeats its very purpose.

Initiating an Acceptable System.—When a system of transfers is inaugurated it generally involves several methods of procedure. All possible information should be secured from the initial application blank concerning the previous work, special talents, and particular interests of each new employee. Such data should be available at the time a transfer is contemplated. There should be a schedule of maximum limits of time which an employee is expected to remain in any one position and periodical rotation of positions in accordance with this schedule. Extensive and intensive training plans must be set up to make it possible for employees to qualify for new positions as they go along. An analysis of all the positions in the organization will contribute greatly to such a program.

If, after an analysis of positions, certain jobs appear to be unduly burdensome, disagreeable, tedious, or monotonous, the job specification will state the fact, together with a statement of the length of time which any employee will normally be permitted to remain on these jobs without a transfer. Or, in operations such as sand blasting and those involving the use of lead, which tend to develop in the operatives an occupational disease, a periodical physical examination should be prescribed in order to discover the need for transfer. Immediate action is necessary for employees who show signs of occupational disease, in order that it may be checked in its incipient stages. Some companies aid these workers in finding more healthful jobs elsewhere if none are available in their own plants.

The Basis of Promotion.—Promotions may be a prolific source of discontent, suspicion, jealousy, and ill will. Such results develop from the prevalent conviction that in modern organizations promotion is frequently the consequence of pull, favoritism, or family relationship. Nothing is more destructive of the general morale than the practice of promoting men on the basis of favoritism rather than meritorious service to the company. But under the haphazard system which prevails in most establishments, it is almost impossible to make sure that advancement will be made on an equitable basis. No definite policy and system of promotion exist in most organizations; each case is considered according to its own peculiar circumstances.

Pull should have no place in the determination of advancement. The two most common grounds for promotion are merit or proved ability and seniority or length of service. It is a much mooted question in modern industry which of these two conditions of promotion should be the determining factor. Reasonableness and justice would hardly sanction a promotional plan which advances employees on the basis of length of service alone. It is doubtful if any establishment would continue to succeed under such an arrangement. Length of service is often an index of proved ability.

Certainly it is a manifestation of stability, loyalty, and dependability, all of which should be given weight in filling responsible positions and granting increases in wages. With years of service also should come increase in skill, general knowledge of the plant and its various departments, powers of leadership, and other desirable qualities which prove real assets in advanced positions. In short, seniority and ability frequently go hand in hand.

From the standpoint of the management and the welfare of the enterprise, no promotions should be made on the basis of seniority in the absence of demonstrated ability and loyalty. Promotion for merit is regarded by American employers as the first prerequisite of equitable treatment. This is also a basic precept of modern personnel administration. Wherever possible, length of service is linked to proved ability as the cardinal basis for advancement. Such procedure has a salutary effect upon the employment relation. Stability of the working force is encouraged because it is known that length of service will receive due recognition. Efficiency and ability are greatly increased because employees are given to understand that in the final determination of promotion competency is at least as important as years of service. The net result is a more contented and efficient group of employees. As Prof. Slichter has pointed out, "When workers can see a definite opportunity to advance by demonstrating their ability, they may be expected to take greater interest in the possibilities of their jobs and not to change readily to others the possibilities of which they do not know. Systematic promotion based upon merit is needed to induce workmen to take a long-run view."[1]

An Open Promotion Policy.—Those interested in the formulation of workable plans of promotion are agreed that as far as possible advancement should follow openly announced and definite lines. This is desirable for several reasons. When the lines of advancement are clearly defined, employees will be promoted to jobs for which their previous experience and skill best equip them, and will advance through a series of positions designed to fit them for the most exacting, responsible, and remunerative positions that may be ahead. Moreover, a systematic organization of jobs will tend in most establishments to provide an outlet for each position in the plant. With well-defined lines of advancement established, employees may know definitely the positions that lie ahead of them and those which are immediately before them. Knowing the precise nature of advanced positions, they can prepare themselves for them with such additional education and training as may be required. This will have a favorable influence upon the reactions of the worker, since he can visualize the potential opportunities and see in the distance a possible goal. Constructive effort is difficult where the goal cannot be visualized.

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[1] SLICHTER, SUMNER, *The Turnover of Factory Labor*, p. 356.

Maintaining Individual Records.—The importance of a system of individual records has already been suggested in the discussions of the eligibility list and rating scale. It will avail little to establish lines of advancement if there is no systematic attempt to discover those employees in the organization who by education, training, experience, and general qualifications are deserving of consideration in filling advanced positions. Such a system of records has several advantages. It gives reasonable assurance that the most deserving and best qualified workmen will be selected for the positions of greater responsibility and higher remuneration. This conduces to justice in the employment relation. Then, too, such procedure diminishes the danger of overlooking especially competent employees who are less aggressive than others and who do not normally make themselves known. Also, employees in need of special instruction and help are discovered, and the original judgments and decisions of the employment department in recruiting, selecting, and placing employees are effectively checked for revision.

The specific items of information gathered for the individual record vary, but certain ones are commonly found wherever an attempt is made to maintain such files. These include attendance, application, habits, adaptability, proficiency, knowledge of departmental routine, general trade knowledge, discipline, dependability, general intelligence, industry, appearance, attitude, disposition, originality, ambition, initiative, stability, length of service, earnings, and physical qualities. Wherever possible these are checked in the light of actual performance. In addition to these items, there are such data as age, nationality, citizenship, race, religion, and marital relation, not all of which, however, are always called for.

Rating Employees for Promotion.—If merit is to be accepted as the basis for advancement, some reliable means of measuring it must be devised. Experiments have frequently been made with such instruments as intelligence, special abilities, and trade tests, job analysis and specifications, cumulative records of performance, and rating plans.

Some organizations have found examinations the most acceptable method of determining the merits of advancement. A large subsidiary of the Socony-Vacuum Oil Company has instituted a system of formal examinations for candidates to fill any plant vacancy. Since this system was adopted, study and reading by the workers has increased greatly. In administering this rating system the superintendent and his assistant formulate questions to test the worker's knowledge of the position, as well as his general and specific knowledge of the petroleum industry. In this way the company officials obtain definite information on the abilities and ambitions, as well as the past accomplishments of the worker.[1] In certain research and actuarial divisions of the Metropolitan Life Insurance Company, all promotions are dependent upon a series of progressive examinations given once or twice each year.

As has been previously mentioned, rating scales have gained considerable prominence in American industry. The Armco Company has used what it calls the "annual labor audit" for the past 18 years.[2] The Du Pont Company rates employees yearly, and its employee supervisors frankly discuss rating scores with the individual employees.[3] General Electric Company bases all promotions upon ratings.[4] The R. H. Macy department store supervisors rate employees. These ratings are then matched with the weekly production record of the employee as a basis for promotion. In order to overcome the personal bias inherent in rating scales of this type, at least three judgments are obtained for each person.[5] In the latter organization increases in salary, transfer, promotion, or discontinuance of service is considered for each employee every 6 months. This periodic review is made at a personal interview with the worker conducted by a committee composed of the department manager, floor superintendent, training supervisor, employment interviewer, and a chairman assigned to conduct meetings. Each employee is told the results of the committee decision, and a special file is kept of those recommended for transfer or promotion.

The main object of such evaluations is to develop the confidence of each employee in the impartial estimates of his efforts and to provide a "system" for periodic review and warranted action. Information is sought on general qualities which are not definitely measurable by means of quantitative instruments, such as physical vigor, initiative, personality, tact, cooperativeness, leadership, organizing ability, industry, and loyalty. Because human judgments are so variable, it is desirable to standardize the basis of them in the rating of employees. This the rating scale seeks to do, as is indicated by the sample shown in Fig. 23. A card is used on which it is possible to check or underscore qualifications,

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[1] *National Petroleum News*, vol. 26, July 1, 1934, pp. 25–26.

[2] MURRAY, C. H., "How Armco Measures the Worth of Its Men," *Iron Age*, vol. 128, Sept. 3, 1931, pp. 611–613.

[3] WALTERS, J. E., "Personnel Maintenance," *Factory Management and Maintenance*, vol. 94, December, 1936, pp. 339–40.

[4] *Ibid.*

[5] CLARKE, W. V., "Rating Employees," *Personnel Journal*, vol. 15, September, 1936, pp. 100–104.

Branch 22
Dept. Loan
Position Assistant
Married or Single Married
Total banking experience 2 years
Other business experience 3 years

Name George S. Perkins
Proposed monthly salary $200
Present monthly salary $180
Age 31
Date entered service Sept. 1, 1935
Prior increase June 1, 1936 $10
Last increase Jan. 1, 1937 $15

Attendance, punctuality, and deportment	Initiative, interest in work, and cooperative spirit	Speed and quantity of work	Reliability, accuracy, and quality of work	Value to department	Total	Rated by
(10)	(15)	(20)	(30)	(25)	(100)	J.M.S.
10	15	15	25	25	90	

Do you consider the above, at present, to be:
1. Capable of more advanced work? Yes 2. Suitably assigned? Yes
Remarks: Has shown remarkable improvement since coming to us.

FIG. 23.—Promotional rating sheet.

the nature of which is explained to each executive doing the rating. The use of such a plan not only tends to standardize the criteria used in judging employees but also to encourage close observation of personal characteristics and performance.

The most effective rating scales conform to certain general principles. They contain only those qualities that are deemed essential in judging a man's fitness for specific positions. Each quality is accurately defined in terms of experience and the requirements of the job. In the rating scale of the United States Army, a modification of which has been applied in many industries, each quality was specifically defined. *Physical qualities* included physique, bearing, neatness, voice, energy, and endurance. *Intelligence* comprised accuracy, ease of learning, capacity to grasp quickly the point of view of commanding officers, ability to issue clear and intelligible orders, estimate a new situation and effect an adaptation to it, and arrive at a sensible decision in a crisis. *Leadership* consisted of such qualities as initiative, forcefulness, self-reliance, decisiveness, tact, ability to inspire men and command obedience, loyalty and cooperation. *Personal qualities* incorporated such characteristics as industry, dependability, readiness to shoulder responsibility for one's own acts, freedom from conceit and selfishness, and willingness and ability to cooperate with others. *General value to the service* included professional knowledge, skill and experience, success as an administrator and instructor, and ability to get results.

After specifying and defining the desired qualities, an exact system of weighting their relative values is devised, and a standard numerical expression of the degree in which a man possesses them is determined. The scale is so constructed that uniform ratings are possible. That is, two or more competent judges acting independently are able to rate the same man with only a negligible difference in their scorings. Finally, the rating scale is so devised that rating can be done quickly and accurately. Impartial administration is thus possible. The best results are achieved where human judgments are supplemented by reference to actual performance and experience records on file in the employment office. The promotional plan of some firms includes the individual experience card, the rating scale with its consensus of judgment from several executives, and certain mental and trade tests.

The original Scott Rating Scale, which was adopted for the United States Army during the World War, had only five qualities, but there are now scales in use with as many as twenty-five qualities. These are frequently given different weights, so that one may count a maximum of 5 out of 100, while another may count a maximum of 25. Instead of grading with numerical digits or letters, such terms as excellent, very good, fair, and poor are often used. The Graphic Rating Scale, developed by the Scott Company, has been the pattern for most scales used in industry. The graphic method allows ratings to be expressed on a line and makes possible minute distinctions. The result for each quality is expressed by a figure which represents the length of the line to the point marked off by the rater, divided by the length of the line as a whole. Thus, if the distance marked off on the first line is 2 inches and the line is 5 inches long, the index rating for that particular quality would be forty. A profile can be obtained by then connecting the points marked, thus constructing a zig-zag line across a scale like that reproduced in Fig. 24.

Regardless of the type of rating scale used, the common purpose of them all is to obtain more systematic and accurate evaluations. Although rating systems have proved valuable in choosing employees for advanced positions, it is doubtful if complete reliance should be placed upon them. Specific instances for inconsistent rating scores were cited in Chap. X. To rate an individual on the basis of several qualities instead of one and to have this rating done by several executives rather than by a single foreman unquestionably represents an advance over the earlier methods of appraising workers. Personal prejudice and subconscious bias are likely to be reduced in this way. Yet most rating systems begin and end with personal opinion. The reliability of such measurements of human qualities, therefore, will always depend upon a number of factors, such as the competence and fairness of those doing the rating, the degree of uniformity that can be accomplished among the several opinions rendered, the avoidance of superficial and hasty judgments, and the possibility of checking the information submitted.

Speed	Very fast	Fast	Medium	Slow
Accuracy	Extremely Accurate		Accurate	Inaccurate
Knowledge	Thorough	Fair		Deficient
Initiative	High	Ordinary		Lacking
Imagination	Excellent	Fair		Unimaginative
Cooperativeness	Exceptional	Good	Fair	Poor
Leadership	Extraordinary	Good		A Follower
Reliability	Fully Reliable	Fairly reliable		Unreliable

NOTE: On each line opposite each quality place a mark indicating the degree in which you think the person being rated possesses the quality named. Connect the points checked.

FIG. 24.—Graphic Rating Scale.

A number of suggestions have been advanced for the improvement of rating systems.[1] It is urged that they should be more quantitative in character, that is, the items to be rated should call for factual evidence rather than mere personal opinion. Thus the quality of "industry" should be rated in terms of production records, and "accuracy" in terms of inspection records. Other items measurable in a quantitative way are education, training, attendance, physical condition, and experience. Care should be exercised in giving relative weights to these items. If quantitative determination is not possible because of lack of production data and similar objective records, the number of personal qualities rated should be kept at a minimum. The qualities chosen should not be rated in more than four or five degrees, namely, "excellent," "very good," "good," "fair," and "poor"; or numerically, 5, 4, 3, 2, 1. The attempt to measure qualities mathematically on a straight line, as in the graphic rating scale, is regarded by many as a questionable refinement based upon subjective judgments. Such refinements, it is contended, are of doubtful accuracy and involve complicated clerical work.

It may be queried: If rating systems do not have mathematical precision and are largely records of personal opinion, why use them, since in the final analysis modern industry and business rest upon subjective personal judgments? The successful executives are those whose personal opinions produce valuable results. But best results are obtained when personal judgments are supplemented by more objective evidences, such as records of attendance, performance, and cooperativeness. Despite their obvious shortcomings, rating systems have marked advantages. They make possible deliberate rather than hasty evaluations. Provision is made for definitely recording a series of opinions which can be used by a department head or his superior as a check against snap judgment made under particularly irritating circumstances. There is an advantage in educating an organization to a better realization of personal values, since this encourages closer attention to the problems of selection, training, and promotion. Finally, the rating system provides a basis for agreement or intelligent disagreement in regard to the question of wage and salary standards. The real problem in connection with any rating plan is to find an effective means of determining the value of the rater's judgment.

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[1] LINK, H. C., "Personal Opinion Records and Rating Scales," *Industrial Management*, vol. 67, February, 1924, p. 80. Also see bibliography for Chap. XVI.

CHAPTER XVII

TRANSFER, PROMOTION, AND DISMISSAL (*Continued*)

The Three Position Plan of Promotion.—No plan of promotion has been given wider recognition than the one outlined by the Gilbreths in what they designate as the "Three Position Plan of Promotion." It is described in their own words as follows:

> The Three Position Plan of Promotion considers each man as occupying three positions in the organization, and considers these three positions as constantly changing in an upward spiral. . . . The three positions are as follows: First, and lowest, the position that the man has last occupied in the organization; second, the position that the man is occupying at present in the organization; third, the highest, the position that the man will next occupy. In the first position the worker occupies the place of the teacher, this position being at the same time occupied by two other men, that is, by the worker doing the work, who receives little or no instruction in the duties of that position except in an emergency, and by the worker below who is learning the work. In the second position the worker is actually in charge of the work, and is constantly also the teacher of the man next below him, who will next occupy the position. He is also, in emergencies, a learner of the duties of his present position from the man above him. In the third position the worker occupies the place of the learner, and is being constantly instructed by the man in the duties of the position immediately above.[1]

As suggested by the authors, such a plan makes necessary a close coordination of all the positions in the organization, which is achieved through the medium of a master promotion chart. This chart, which varies with the establishment, is placed in the hands of the individual to whom control of promotion has been entrusted. It represents a schematic arrangement of all positions in the organization and clearly defines the lines of most rapid advancement for the worker. In this way, the needs of the organization are definitely specified, and the worker's potential opportunities for increased pay and responsibility are visualized. Both transfers and promotions are facilitated by this scheme and it is possible to eliminate the so-called "blind-alley" jobs, or at least to preclude from them workers of promise and ability.

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[1] Gilbreth, Frank B., and Lillian M. Gilbreth, "The Three Position Plan of Promotion," *Annals of the American Academy of Political and Social Science*, vol. 65, May, 1916, p. 290.

The education and interest of the worker in promotional opportunities are cultivated through the individual promotion charts, which contain records of each member of the organization. When a worker enters into the employment relation with the firm, the man in charge of promotions prepares and assigns to him a promotion chart, or "fortune sheet," which shows his present position and the possible and probable lines of his advancement if he makes good. The authors present the following explanation of this individual chart:

> The sheet then becomes his fortune map, or fortune schedule. The projected line of promotion is outlined in green, and upon it are placed the dates at which it is hoped he may reach the various stages of advancement. At set times the worker and the promotion chief, or one of his helpers, meet, and the line of actual progress and advancement of the worker is traced upon the map in red, with the dates of achieving the various positions. The two then consult as to existing conditions, the special reading or studying necessary for fitting for the new positions, possible changes, or betterments.[1]

Such an arrangement necessitates job analysis and specifications; an adequate system of records; knowledge of each employee's training, qualifications, experience, and performance; constant attention; and impartial administration.

The Understudy System.—Many firms have adopted the method of promotion known as the "Understudy System." Although the application of this plan is usually confined to executive positions, it may be extended to include practically the whole organization. When applied to executives, each person, from principal executives down to foremen, has an assistant, or understudy, who is preparing himself to take the position of his superior, temporarily in cases of emergency and permanently when possible and necessary on account of a vacancy caused by death, resignation, or promotion. A chart of the organization is sometimes prepared showing the various positions, the responsibilities incident to them, the men holding them at present, and the men who could be advanced to fill the vacancies that might occur. The plan, which has been used successfully by certain railroads, has proved decidedly effective in training competent executives. Definite responsibility is imposed upon executives to select promising assistants who can succeed them if necessary.

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[1] *Ibid.*, pp. 291–292.

The general policy of hiring from within the organization is followed universally by most corporations. In a survey of the practice among commercial banks, reports that "98 per cent of our positions are filled by promotion," "when a vice-president dies we hire another page," and "all of the new officers since organization have been made by promotion from the clerical force," are indicative of the general policies followed.[1] Some banks have carefully laid plans for promotion. In one institution, for instance, the bank has been divided into five divisions, and the head of each division is requested once each year to prepare a list of the best 10 per cent of the employees upon a basis of present worth and potential ability. The basis of selection here is (1) best in group, (2) doing well in present jobs, (3) possessing more than average ability, (4) having capacity for further development, and (5) necessary for carrying on the work of their respective groups. From this original list, a second list, then successively third, fourth, and fifth lists are composed through which additional qualifications weed out the weaker candidates until the final list contains the names of those within the organization who by all methods of analysis seem to be the strongest candidates for present or prospective positions. The inclusion of a name on the final list does not insure immediate promotion if no suitable opening exists, but it does insure thorough consideration when and if the bank needs new officials.[2]

The American Rolling Mill Company of Middletown, Ohio, encourages men to prepare themselves for advancement through study and special effort. The director of employment visits each plant every month and talks with officers and workmen about promotion timber.[3] The *Armco Bulletin* publishes notice of every promotion. A selected list is maintained at all times, and a "promotion prospect" book is placed in the hands of every official. This book gives the history and picture of every technical and well-trained man employed in recent years, with reference to the possible position for which the candidate is being groomed. In this way the company has an intimate knowledge of each employee. Once every year a labor audit is made, after which each man is classified according to the progress made.[4]

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[1] Industrial Relations Section, Princeton University, *Personnel Programs in Banks*, 1935, p. 24.

[2] *Ibid.*, p. 25.

[3] "Promote Employees from the Ranks," *Iron Age*, vol. 123, Jan. 17, 1929, pp. 204–207.

[4] *Ibid.*

Promotion from Within.—There can be no doubt that promotion from within an organization is a desirable policy and offers distinct advantages over recruitment from outside sources. There will be occasions, of course, when it will be both desirable and necessary to go outside the organization to find men qualified for the available positions. The type of employee wanted for an advanced position may not be found in the plant, or it may be expedient to bring in new blood. But ordinarily, vacancies can be filled from the firm's own employees.

The case for promotion from within is a good one. Such procedure usually makes possible a whole series of promotions. When men are advanced from the simpler operations to the more complex and responsible positions, vacancies occur all along the line, new employees being recruited from the outside only to fill the vacancies in the simplest jobs. This has a desirable effect upon the entire working force and serves as a great stimulus to interest and general cooperation. It is too much to expect old employees to look complacently upon the practice of bringing in outsiders to "grab off the plums," as one disgruntled worker put it. Once the workers are convinced that the latter practice prevails, the cultivation of good will and stimulation of interest and loyalty are impossible, and competent employees seek elsewhere for larger opportunities. But if employees are aware that it is an established policy of the firm to fill advanced positions from its own working force, there is a conscious effort on the part of ambitious workers to prove their ability and improve their efficiency. This is especially true if the company maintains a formal system of individual records which chart the achievements of each workman.

Still another advantage of promotion from within is found in its effect upon the recruitment of new employees. If the firm has a reputation for giving its own workers the first opportunity to assume the more responsible and better paid positions, a desirable class of workers will seek employment with it. Quite apart from these distinct merits is the fact that considerably more reliable information is available concerning the qualifications and performance of the company's own employees than can be assembled for those coming from the outside. If the company has anything approaching an enlightened employment policy, its files contain accurate and reliable data concerning the ability, training, experience, cooperativeness, loyalty, and performance of each of its workers. In recruiting employees from the outside, it must necessarily rely to a great extent upon the opinions and judgments of former employers, who have no particular interest in the company's welfare.

Men qualified for the vacant positions are not always available within an organization. Moreover, it is somewhat of a temptation to retain competent workers in their present positions because of their proved ability in them. This temptation has given rise in many cases to the undesirable practice of retarding deserving employees. In some instances, one finds the policy of promoting from within rejected on account of increased cost of training or breaking in new workers for the series of vacancies which normally occur when such a system is used. Recruitment from without involves the breaking in of only one man; recruitment from within may necessitate the breaking in of many. Thus shortsighted employment managers argue against the practice, forgetting that the additional expense and trouble are more than offset by the good will and efficiency which issue from it.

Request for Advancement.—In every organization there are employees who are especially ambitious to advance to positions of greater responsibility and remuneration. To what extent is it judicious to encourage such employees to make known their desires and preferences? Many employers give no encouragement to requests for promotion, stating in defense of their position that their employment relations are so intimate as to yield complete information concerning the qualifications and desires of each worker. Plant and office executives are expected to be constantly on the lookout for unutilized exceptional ability, so that it is unnecessary to provide opportunities for appeal from those employees who may feel that their talents have been overlooked in making promotions. Still other employers refuse the privilege of requesting advancement on the grounds that to do so would encourage a deluge of petitions, few of which would have any merit.

Despite such opposition, however, many companies have adopted some plan for receiving employees' requests for promotion. Some concerns advertise each vacancy on their bulletin boards, and employees are encouraged to make application for the position if they feel qualified to fill it, or to take the examination if one is required. Workers in some organizations are free to seek promotion at any time and are assured that their requests will receive careful consideration. Such requests are made to the immediate supervisor under whom the employees work or are brought directly to the attention of the executive in charge of these matters. There is a consensus of opinion, however, that the "open door" policy has not yielded encouraging results, except for its favorable effect upon the morale of the workers. Experience indicates that ability is often lacking when ambition is conspicuously present. Moreover, requests are often for advances in wages and not for additional responsibility. Then, too, there is a definite limit to the number of very desirable positions existing in any organization.

Promotions Up and Out.—In practically every organization, there is considerable unutilized ability. Employers will generally admit that there are workers in their establishments whose potential capacities have inadequate opportunity for development and expression, and the more generous of them are willing to aid talented employees in obtaining the opportunities they deserve.

In not a few instances, employers make a practice of promoting up and out. Capable employees are transferred to better positions in other plants operated by the same corporation, or an effort is made to place them in positions of responsibility with other firms. Personnel managers are frequently able to do a constructive service along these lines through the medium of the local association of employment executives and personal friends in other plants. There are employment managers, of course, who are opposed to such a practice on the grounds that it is asking too much of a business firm to release its best employees to other companies. Many other employment officers, as well as employers, regard it as a moral responsibility and consider it good business to help men of unusual ability find greater opportunities elsewhere, provided their own organizations are unable to offer proper inducements to them. "It is true," observes an employer, "that occasionally we might lose valuable trained employees in this way, but in the meantime we have profited by their efficiency, and the incentive we create through this policy all the way down the line more than compensates us for the loss of the valuable employee who has been promoted to another firm. Further, it is always beneficial to us to have good friends in other companies."[1]

Wage Increases as a Substitute for Promotion.—Wages are sometimes increased in an attempt to compensate the worker for loss of promotion to a higher position, but additional remuneration will seldom prove an adequate reward. The following observation is a valid one:

> If, for example, a machinist is granted a foreman's wage on the old job in lieu of a foremanship, it can scarcely be said that he has been fully com-

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[1] Quoted by Paul F. Gemmill, *Industrial Management*, vol. 67. April, 1924, p. 247.

pensated for the loss of promotion in rank. For once a foreman, he may be in line for a whole series of executive promotions; whilst as a tradesman, even a highly valued one, his field of development is sharply limited. Despite the contention of some managers that "promotion" means to the workers not greater responsibility but more money, there are plenty of workers who recognize that the two usually go together, and who are willing to undertake the one to secure the other. Evidence of this fact is the large number of high executives of today who were once workers in the ranks. The statement that a wage increase is adequate compensation for arrested promotion remains, therefore, to be proved.[1]

It is doubtless true that supervisors are sometimes responsible for loss of promotional opportunity to employees of exceptional ability and proficiency. There is a great temptation for a departmental head to hold on to an unusually competent worker who may be qualified to fill a position of greater responsibility, since thereby his own department's efficiency is maintained. Employers, however, are quite inclined to condemn such procedure as unjust to the worker and deleterious in the long run to the company. Says a large employer of labor, "We believe there is no quicker method of destroying incentive and morale than to deny a man promotion because of high efficiency in any job. This would be a very weak and selfish policy, and would react violently against the company's interest."[2]

"Blind Alley" or "Dead End" Jobs.—A serious problem in many industries is the kind of job which leads nowhere and gives to the worker no promise for the future. These are commonly referred to as "blind alley" or "dead end" jobs. There is little or no solution for this problem in industries in which the majority of jobs are of this character, but in other industries much can be done and is being done to provide an outlet to better positions which open up a field of opportunity.

In this connection, it is necessary to recall the fact that there is a type of worker, sometimes referred to as the "blind alley man," who is content to remain indefinitely in the same position and who has no desire to advance to a job requiring greater preparation and exacting more responsibility. There is John Jones, for example, who, ever since that first year when he entered an Illinois machine shop as an immigrant worker, has remained at the same drill press. For 25 years now, he has performed his job faithfully and contentedly. A short time ago, we went back to the old shop and found him at the same machine. "Still here, John," we remarked. "Yes, still in the same old groove." Then he added: "But I like the groove." It is difficult to get men like him to accept new positions, especially if these entail additional responsibility and training. Ambitious workers, however, will not long remain in "dead end" jobs but will change their employment relationship if advancement is not forthcoming in the old establishment.

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[1] *Ibid.*, p. 245.

[2] *Ibid.*

Responsibility for Transfers and Promotions.—The traditional practice in American industry is to place the responsibility for transfers and promotions upon the overburdened foreman, who has at his disposal neither the time nor the facilities for intelligent handling of such matters. Seldom now does a progressive firm permit a foreman to make a transfer or promotion solely on his own initiative and authority, but it is indispensable that he shall have an active part in this phase of personnel work. This must always be so, because the foreman, more than anyone else, possesses firsthand knowledge of the ability and performance of the employees who are under his supervision. Frequently, promotions and transfers are made by the superintendent upon recommendations of foremen, and in many cases the personnel department is also consulted. Promotions to high executive positions are usually left to the chief officers of the company, but, in the case of positions of lower rank, there is a tendency to provide for cooperation between the superintendent, departmental heads, and the personnel manager in making final decisions. Such cooperation is highly desirable and is doubtless the most effective and practical method yet devised.

Factors Limiting Transfer and Promotion.—Generous policies and advanced methods of transfer and promotion are not always practicable because of conditions peculiar to particular organizations. The attitude of boards of directors and high executives is always a limiting factor. The nature of the business or industry and the size of the organization will inevitably have an influence. A plan which works well in an organization employing 3,000 men will not do at all for firms having only a few hundred employees. A scheme which is effective in a steel mill might be totally ineffective in a department store or a general office. In short, no ideal system of transfers and promotions has yet been devised, and it is hardly to be expected that a universally applicable one will be forthcoming. Whatever may prove to be the character of the plan, it will never be successful unless a definite attempt is made to give the employees an intelligent understanding of its fundamental principles and methods.

Causes Leading to Discharge.—The discharge of employees is an essential function of effective organization. Progressive employers, however, know that the firing of a worker is not always the easiest and quickest way out of an unfortunate situation. The arbitrary and dogmatic discharge of even one single employee of a company has often been responsible for serious ill feeling on the part of many members of the working force. In many instances, discharge by the employer has led to a break in industrial relations in the form of long and costly strikes. On the other hand, management's failure to take prompt and deserving action against a member of the working force who is not worthy of employment with the company always threatens the morale and discipline of the organization and can lead to gross negligence and decreased efficiency, which add to costs of production and, in the long run, tend to lower both profits and wages.

There are many reasons why discharge is necessary. The personnel or employment department may have exercised poor choice in selection. Training or instruction may have been so meager that the employee had little chance to succeed from the start. In other cases, personal character or conduct may make it imperative to sever the employment relationship. In a special inquiry into the hiring and firing procedure followed by 149 bakeries, the United States Department of Labor discovered that inefficiency (reported by 88 companies), dishonesty and theft (86 companies), drunkenness (79 companies), and either carelessness or indifference were among the chief causes for the discharge of employees.[1] Other causes are accidents, insubordination, personal conduct, uncleanliness, infraction of rules, fomenting discord, destructive negligence, wastefulness, and physical unfitness. In a study of the common causes of discharge of office and clerical workers within 76 corporations,[2] it was discovered that 90 per cent of the cases were discharged because of character traits, 14 per cent for carelessness, 11 per cent for lack of cooperation and laziness, 8 per cent for absences other than those caused by illness, 8 per cent for dishonesty, and 10 per cent for lack of specific skills preventing promotion.

Discharge Warning.—The discharge rate for American industries is set forth in Fig. 19 in Chap. XIII. In all matters of discharge, the employee's case should receive careful consideration, and all arbitrary discharges should be avoided. The procedure of a large department store is indicative of the technique that is often followed in matters of discipline:

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[1] "Personnel Policies and Working Conditions in the Baking Industry," *Monthly Labor Review*, vol. 43, November, 1936, p. 1108.

[2] "Discharge of Office and Clerical Workers," *Monthly Labor Review*, vol. 42, February, 1936, pp. 346–347.

> Dismissal where a replacement is to be made—
>
> *A.* First six months of service.
>
> During the first six months as a regular employee, the person is to be considered as on trial and may, with the approval of the employment manager, be dismissed with a minimum notice (or pay in lieu of notice) of one week. The person must, however, have received at least one caution by his supervisor (of which record was made on the employee's record card) that the work was not up to standard.
>
> *B.* Six months' to two years' continuous regular service.
>
> Before any notice of dismissal there must have been a definite warning given by the employment office, store superintendent, or division head that the employee's work is not up to standard and that unless there is an improvement within a specified reasonable length of time (not less than 2 weeks), the employee will be dismissed (or pay in lieu of notice of 1 week). The approval of the personnel director is required before such notice may be given.[1]

The discharging of employees is usually done by the person responsible for the hiring. In a majority of the 149 bakery plants covered by the Department of Labor survey, these two officials were the same person. Appeal from discharge to a higher official or mediation board was provided in 62 of the 140 plants reporting on this point. Among these, 4 had an established mediation board; 10 reported recourse through the trade union, and the remaining 48 allowed a review of the case by the superintendent or a higher official. Many union agreements specify that a union representative must determine if the reasons for discharge are sufficient, and some go even further by providing for mediation boards.[2]

Responsibility for Discharge.—Traditionally the power of discharge has been vested completely in the hands of the foreman. In recent years, however, as indicated above, there has been widespread acceptance of the idea that the supervisor's power of hiring and firing should be curtailed, if not absolutely abolished. This radical departure from traditional method rests upon very plausible grounds. Industrial and business experience is replete with evidence of the fact that discharge is frequently the result of misunderstandings between a departmental head and the individual employee and that the chief may be just as much at fault as the worker. Peculiarities of disposition, temperament, and personality form the basis of frequent disagreement and discord between employees and their immediate supervisors. Under another foreman or in another department, the worker, whom one supervisor discharges as undesirable, may prove unusually cooperative. Friction between workers and their supervisors is often the result of spontaneous, momentary anger or passion. When he has "cooled off," a foreman frequently regrets his action in discharging an employee, and the discharged worker often laments his hasty display of temper. In the heat of the argument, conciliation is impossible and an impartial adjudication of the grievance cannot be made by either party to the dispute. Because of these circumstances, large numbers of discharges are unjust and a great many voluntary quits are unwarranted. Discharge is a responsibility which cannot be delegated as an absolute power to the average foreman. Some more intelligent and impartial system must be devised.

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[1] Industrial Relations Section, Princeton University, *Personnel Programs in Department Stores*, 1935, p. 50.

[2] United States Bureau of Labor Statistics, *Monthly Labor Review*, vol. 42, November, 1936, p. 1108.

In an attempt to control the power of discharge, some firms have confined the supervisor's authority to his own department, delegating to the employment manager or some other official the power to dismiss a workman from the service of the company. In the minds of certain employers who have a pronounced disposition to fair play, this practice does not go far enough, since there is still room for considerable injustice in allowing the foreman to dismiss workers from his own department. Certainly it does not offer sufficient encouragement to the exercise of good judgment and precaution on the part of the foreman, in so far as his dealings with his men are concerned. For this reason some companies have limited the supervisor's power to the recommendation for discharge, final decision being vested in the hands of the personnel manager, a higher executive, or a joint council made up of representatives of management and men, with the privilege of appeal to the general manager or an arbitration board.

There has been some opposition to the practice of curtailing the foreman's power of discharge, the position being taken that such a practice undermines his ability to maintain discipline. Foremen have been extremely jealous of their traditional powers in this particular and have manifested strong resentment when a change in policy modified or destroyed their control. This matter of discipline, however, has another side. Says Prof. Slichter, "It is a pernicious idea, a relic of the 'drive' system under which the foreman needed to command the fear of the workman, that the absolute right to dismiss from the department is necessary to enable the foreman to 'maintain discipline.' "[1] Foremen will not tend to exercise discretion and precaution in the matter of discharge if their power in this respect is absolute within their own departments. When, however, they can merely make recommendations for discharge and realize that their decisions are subject to review and revision by higher authorities and more impartial bodies, their action in such matters will be less hasty. The latter procedure substitutes responsibility for irresponsibility and consequently insures greater justice.[2]

Even where the supervisor's power of discharge is taken away and vested in some other official or group of officials, the results are not necessarily satisfactory. There still exists the feeling that it is usually expedient to sustain the action of the subordinate official in order to preclude the possibility of a breakdown in shop or office discipline. Or, if this is not true and the deliberations are strictly impartial, personal opinions and human judgments are still dominant in influencing final decisions. The official or committee must rely largely upon the opinions and testimony of the chief and worker involved, with the former's story having the greater weight in most cases. In the interest of complete justice it is necessary, therefore, to discover a standard or impersonal basis which can be substituted for personal opinion and the human equation. Individual records are as yet very imperfect, but they give promise of improvement over the old methods. Such records represent a step in the right direction. A quantitative, objective record of an employee's activities reduces to a minimum errors due to human judgment. If the departmental head has consistently given the workman a satisfactory rating in productive efficiency, attendance, punctuality, honesty, patience, dependability, moral character, length of service, loyalty, and obedience, some explanation will have to be forthcoming in case such a worker has been discharged or recommended for discharge by the foreman. He will have to square his judgment and action with the worker's record on file in the employment office.

In order that the problem of discharge may be handled intelligently, it is also necessary to standardize as far as possible the basis for dismissal. This means that the reasons for dismissal shall be definitely stated and printed for distribution among employees,

[1] SLICHTER, SUMNER, *The Turnover of Factory Labor*, p. 377.

[2] *Ibid.*, p. 378.

and a copy of the rules and regulations given to each new worker when he enters the service of the company.

Within a growing number of organizations, an intelligent handling of discharge has encouraged the establishment of impartial discipline boards, one of the best known of which is the arbitration board of William Filene's Sons Company of Boston.[1] Any complaints against discharge may be taken to the board for review, and the final ruling of the board in such matters is binding. The impartial attitude of the board is at least suggested by the fact that over a period of 21 years of operation, decisions favoring the store were rendered in 71 cases, and those favoring the appellant were rendered in 61 cases. Sometimes a similar board is given power only to recommend to the executives what final action should be taken in cases where a complaint has been registered against discharge; in other plans a final board of appeal is provided where the decision of an arbitration board may be protected.

Government Regulation Concerning Discharge for Union and Other Activities.—Until the passing of the National Labor Relations Act in 1935, it had been common practice among employers in all lines of business to discharge employees because of union activities or court testimony. This practice has been supported in part by the enforcement of the "yellow-dog contract" and by the services of labor spies. It is estimated that in 1935 there were between 40,000 and 50,000 labor spies in American industry,[2] men hired either by employers or detective agencies to work along with other workers and report daily upon union activities of employees. Thus just as soon as a leader was apprehended he would be discharged under some such pretense as incompetency or insubordination.

This practice was brought under partial control on Apr. 12, 1937, when the United States Supreme Court upheld the constitutionality of the National Labor Relations Act in five important cases. This law, applicable only to employees in certain industries engaged in interstate commerce, aims to encourage the practice and procedure of collective bargaining; to protect the exercise of the workers' full freedom of association, self-organization, and designation of representatives of their own choosing; and to aid them in negotiating the terms and conditions of their employment. To this end, the act, among other things, makes it unlawful for any employer coming within its scope to discharge or otherwise discriminate against an employee because of union activities or because of charges or testimony given against the employer.[1] Any violation of the law is subject to a restraining order from the National Labor Relations Board and may be punished by fine or imprisonment, or both. A second federal bill, the Fair Labor Standards Act, received serious consideration during the 1937–1938 sessions of Congress. Several of its major provisions, notably those which establish minimum wages and maximum working hours for American workers employed in interstate commerce, have already been enacted into the Wage-Hour bill which became a national law when President Roosevelt attached his signature to the act on June 25, 1938. Still to be enacted into law, however, is the original proposal to prohibit the employment of a worker for strike breaking or labor espionage duties, making such action a misdemeanor on the part of both employer and employee.

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[1] La Dame, Mary, *The Filene Store*, p. 274.

[2] National Labor Relations Board, *Governmental Protection of Labor's Right to Organize*, 1936, p. 15.

While protective legislation passed so far has touched only a few of the thousands of employers engaged in intrastate business, there is, nevertheless, strong reason to believe that similar restrictions will soon be placed upon all employers, regardless of size and scope of activities, through the enactment of individual state laws. In fact, during 1937, five states (Utah, Massachusetts, New York, Pennsylvania, and Wisconsin) enacted laws modeled after the National Labor Relations Act,[2] and it is safe to assume that others will soon follow. The state laws already passed regulate the employment relations of employees engaged in work of a strictly intrastate nature. Provision is made for a commission to administer the law, guaranteeing to employees the right of self-organization and collective bargaining, and protecting them against discriminatory discharge as under the national act.

Layoff.—Layoff refers to a temporary suspension of the labor agreement because of poor business conditions, seasonal fluctuations in industry, or some emergency situation developing within the organization itself. The problem of layoff has become considerably more important during the depression period than that of discharge for cause and has much wider social implications. The problem has been defined as follows:

> Many more difficulties and decisions are involved in a general reduction of the working force than in the discharge of one employee. These questions and others face the management: Who shall be the first to go? The

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[1] For a full statement of the provisions of the act, see Chap. XXXIV

[2] United States Bureau of Labor Statistics, *Monthly Labor Review*, vol. 45, October, 1937, p. 854.

least efficient? The more recently employed? Those who have fewest personal financial responsibilities? And whatever the decision as to order of layoffs, how can the company ameliorate the blow to the employee?

The two factors given most weight in deciding upon layoffs seem to be efficiency and length of service. Personal need is not often mentioned as a deterrent to layoffs, but is often considered in determining the amount of the dismissal wage. The fact that the least efficient are not necessarily the employees most recently hired complicates the layoff problem. The long-service employees are usually considered first for openings in other departments, and it is principally for them that shorter hours and other spread-work devices are tried. But these methods do not always prevent some layoffs from this group.[1]

The Dismissal Wage.—The dismissal wage may be defined as a "payment in addition to any back wages or salary made by an employer to a worker whose employment is permanently terminated for causes usually beyond the control of the employee."[2] In order to lessen the shock of the loss of income because of layoff or discharge, many organizations have offered a dismissal wage. During the recent depression period, more than 150 large companies, including public utilities, railroads, manufacturing concerns, and many smaller organizations, adopted the practice of giving the employee at the time of layoff or discharge the equivalent of 1 or 2 weeks' wages in lieu of dismissal notice.[3]

The payment of a dismissal wage, however, is largely a depression product in the United States, although the practice was first introduced by the Delaware and Hudson Railway in 1922. Many foreign nations have made the payment of such a wage compulsory. At present, forty foreign countries require notice or compensation for dismissed workers, and twenty-three more have laws concerning special classes of workers.[4] In Brazil, for instance, the law of 1935 applies to all persons who work for pay, and benefits are equivalent to 1 month's pay for each year of service or fraction thereof. In Austria, after the World War, stringent provisions were put into effect governing the discharge of workers, but were abandoned later. In Mexico, employees discharged through no fault of their own are given 3 months' pay. In Ecuador, employees of 1 year's service or more are given 2 months' pay. In Bolivia, allowances range from 1 month's pay for less than a year's service to 25 months' pay for 25 years or more of service.

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[1] Industrial Relations Section, Princeton University, *op. cit.*, p. 51.

[2] HAWKINS, E. D., "The Dismissal Compensation Movement," *Annals of the American Academy of Political and Social Science*, vol. 165, January, 1933, pp. 24–30.

[3] BALDERSTON, C. C., *Executive Guidance of Industrial Relations*, p. 401.

[4] United States Bureau of Labor Statistics, *Monthly Labor Review*, vol. 40, April, 1935, pp. 847–860.

The present practice of paying dismissal wages to employees in American industries is not very extensive. In 1931, the National Industrial Conference Board found that out of 2,618 companies questioned only 53, or 2 per cent, were operating formal dismissal-wage plans. Thirty other companies paid such wages in special cases.[1] Approximately 212 or more American companies paid dismissal compensation at some time prior to 1934.[2] These firms employed 2,250,000 to 2,500,000 persons, and it is conservatively estimated that over $8,500,000 have been paid to 80,000 employees permanently laid off by some 60 of the largest companies. Individual payments have been equal to as much as 1 or 2 years' wages or salary, but the amount of compensation for each person in 60 companies averaged $108.30.

Plans for dismissal compensation payments vary greatly among different employers. Between 1929 and 1930, over 3,000 employees of the United States Rubber Company lost jobs on a month's notice owing to the closing down of several of the company's plants. Workers not pensioned were paid 1 week's pay for every year of employment, if the service record was 15 years or if they were forty-five years old and had a 10-year record. During this period 500 employees received from $125 to $2,000, averaging $500.[3] When the Norton Company closed down one branch plant, each employee not absorbed in another plant was paid $100 if the service period was 3 years; $150, if the record was for 5 years; and $150 plus $15 for each year of service above 5 years. When the Armco Company shut down a mill in 1929, it paid a discharge bonus of one-half of regular pay (minimum of $50 per month) for 6 months, or until new employment was procured. The Dennison Manufacturing Company adopted a wage dismissal policy in 1929 by giving 2 weeks' pay where discharge was due to changes in method or merchandise. A plan adopted by Hill Brothers in 1931 provides 1 day's pay for each month of service over 6 months, but it is paid only if the job is discontinued. General Foods Corporation gives 30 days' notice where a branch is discontinued. Employees with from 1½ to 4½ years of service receive 2 per cent of the last yearly wage multiplied by the full number of years of service.[1]

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[1] *Iron Age*, vol. 128, Aug. 20, 1931, p. 517.

[2] HAWKINS, E. D., "Dismissal Compensation in American Industry," *Monthly Labor Review*, vol. 39, November, 1934, pp. 1067–1077.

[3] SCHWINNING, G. T., "Is The Dismissal Wage a Solution for Technological Unemployment," *Forbes Magazine*, vol. 30, August, 1932, pp. 13–14.

Dismissal wages are not to be confused with unemployment compensation, for the former makes a final payment to the worker upon being dismissed from the company, whereas the latter is compensation during unemployment periods. Social pressure, the necessity of removing inefficient personnel, and desire to reduce labor turnover are the main reasons for the adoption of such plans.[2] Numerous locals in over forty trade unions have agreements calling for dismissal wage payments in lieu of dismissal notice. Recently there has developed a definite tendency to extend dismissal wage coverages to hourly workers and those of medium service periods ranging between two and ten years. Several companies have found it necessary to raise the lower limit of service from one to five years. No agreement as to method of payment can be found among the plans now in force throughout the country. It is, however, interesting to note that whereas lump sums were formerly emphasized, periodic payments are now being gradually adopted.[3] Of sixty companies reported in a recent study,[1] thirty-five paid lump sums, thirteen made periodic payments and the remainder followed some combination of these two systems. As a rule dismissal wages are financed through general company funds, withdrawals usually being charged to wages. Only seldom are dismissal wages granted to employees who have been discharged as a disciplinary measure. Although a well-defined dismissal-wage system is a progressive development in the field of personnel administration, at best, such systems are only feeble aids in meeting the economic consequences of layoff and discharge.

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[1] *Ibid.*

[2] See "Dismissal Compensation Plans," *Monthly Labor Review*, vol. 36, March, 1933, pp. 496–497.

[3] Industrial Relations Section, Princeton University, *op. cit.*, p. 52.

CHAPTER XVIII

WAGES AND WAGE SYSTEMS

The Significance of Wage-payment Systems.—The economic basis of wage payment remains unchanged, but new methods of computation are constantly being formulated and applied. Adam Smith, writing a century and a half ago in the *Wealth of Nations*, stated that "the produce of labor constitutes the natural recompense or wages of labor."[1] This is a simple, sound theory, but its application constitutes one of the most difficult of all employer-worker problems; it gives rise to innumerable labor disputes and is intimately related to the great social problem of an equitable distribution of wealth. Were it possible to devise a simple but definite formula for determining precisely what each worker produced, and then to insure that he would receive the equivalent of all of his production, many of our economic ills would disappear.

From the point of view of the employer, wages are important chiefly because of their relation to good will and efficiency. If wages are adequate and the time and method of payment are satisfactory, considerable progress is made toward amicable industrial relations and the encouragement of efficient production. In the absence of a satisfactory wage scale, no amount of benevolent paternalism functioning through an imposing array of welfare activities will suffice to make employees contented and efficient. This is not meant to imply that an acceptable wage scale is per se a guaranty of productivity and cooperation, although there is experiential basis for the belief that this tends invariably to be so.

For the worker, wages are of primary importance on account of their necessary and intimate relation to his whole standard of living. Because he normally has no surplus funds upon which to draw, the contents of the pay envelope and the purchasing power of his income in terms of commodities and services are of vital concern to him. Upon his real income will depend his ability to provide adequate and proper food, clothing, and shelter for himself and his dependents. Upon it, too, will depend not only his ability to provide for his family a reasonable and desirable measure of additional comforts and some luxuries, but also his ability to accumulate a modest surplus for the almost inevitable "rainy days" of sickness, accident, unemployment, old age, and death. There is statistical evidence aplenty in proof of the causal relation between income, on the one hand, and health, longevity, economic efficiency, and social status, on the other.[1]

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[1] Vol. 1, Chap. VIII.

The community's chief interest in wages develops from these two other points of view. The community of consumers is vitally concerned when increasing wages are paid out of its own pockets, as they are likely to be in the absence of increased labor or technical efficiency. Moreover, society in general must always concern itself with the effects of low wages on the health, longevity, birth rate, morality, and efficiency of its constituent members.

Definitions and Methods of Procedure.—Wages, that is, *money wages*, refer to the dollar income received by the worker for his labor during a specified period of time. *Real wages* are more important to him, because they consist of what money wages will buy. The *wage rate* is the amount of money paid for a specified period of labor time or for a specified volume of productivity. *Salaries* are wages contracted and paid to white-collar, or supposedly higher grade, employees for relatively longer periods of time, and are always based directly upon time rather than actual productivity. *Rate setting* is the establishment of systematic standard wage rates to be received by a worker for accomplishing a given objective determined by careful job analysis, specification, and standardization. Rate setting is divided into four activities: the scientific classification and specification of the job or position; the setting of standards through job standardization, and time and motion analysis; the establishment of standard wage rates on the basis of these standards; and the computation of rates according to the standards established.

It is not difficult to imagine how important these practices are to both employer and employee. Competition between enterprises is often very keen. In such cases, labor costs, along with other costs, must be equalized unless new ways of reducing overhead are found. Within any organization, employees are likely to discover instances of inconsistency and disparity in wage rates paid for the same or similar work. Morale is soon weakened and efficiency decreased unless equalization is made. Furthermore, no systematic plan for hiring or promotion can possibly succeed if scientific rate setting and salary standardization are not followed. Every wise employer fully recognizes how important this policy is in the maintenance of harmonious labor relations.

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[1] For a summary of some of these data, see G. S. Watkins, *Labor Problems*, Chap. IX; P. H. Douglas, C. N. Hitchcock, and W. E. Atkins, *The Worker in Modern Economic Society*, pp. 317–319; and California Medical Association, *California Medical Economic Survey*, November, 1937. The last publication presents a comprehensive picture of the relationship between income and medical care.

Methods of Wage Payment.—In industry, as in most other forms of organization, one finds constant experimentation with concrete schemes designed to achieve what is believed by employers to constitute desirable standards of efficiency and justice. The chief practical interest in any method of remuneration, at least from the standpoint of the employer, is the manner in which employees react to it. Both for the employer and for the worker, wages are a means to an end rather than an end in themselves. To the former, the criterion of successful wage standards is their influence upon the quantity and quality of output and the workers' loyalty; to the latter, the test of acceptable wage standards is their adequacy to provide for the maintenance of a desirable standard of living. The real problem of wages is the coordination and effective realization of both of those objectives, and the method of wage payment must be calculated to accomplish these ends.

Numerous wage-payment plans have been devised, but, in general, wages are paid upon a time basis, upon volume of output, or some combination of these two methods. Wage plans and financial incentive systems may be roughly classified as follows:

1. *Straight time* and *salary schemes*, under which the employer assumes all the gain or loss due to variation in output. Payments by the hour, day, week, month, or year, or any multiples of straight time payment are the most common types of time wage-payment plans.
2. *Piece-rate schemes*, under which wage payments are made according to the quantity or volume produced. Under this system the employee, rather than the employer, assumes all the gain or loss due to changes in amounts produced. There are many varieties of piece-rate schemes, among the most important of which are the ordinary piece and straight commission rate, and the Taylor, Merrick, Gantt, and Haynes-Manit wage plans.
3. Wage-payment plans representing a *combination of time and piece-rate schemes* where gain above a guaranteed daily wage is shared in some degree between the employer and employee. In this division the Halsey, Barth, Rowan, and Bedaux plans are most widely known.
4. Wage-payment plans under which an arbitrary point within certain limits has been chosen as the basis of wage determination. Most important within this group are the Emerson efficiency bonus, Bigelow bonus, and the Parkhurst differential bonus plans.

Inasmuch as the more important individual systems will be discussed in detail later, only the broader classifications need be dealt with here. Our immediate concern is with the general schemes of wage and salary payments which are the customary methods of remuneration and which include the time wage, the piece wage, general profit-sharing plans, and the sliding scale. Fundamental questions relating to salary standardization and wage administration will then receive our attention. An analysis of detailed wage plans is presented in the following chapter.

Time Wages.—The term "time wage" is usually applied to that method of remuneration under which the worker is paid a specified amount for a definite number of hours of his time. The rate of wages may be calculated by the hour, the day, or the week; or, it may be based upon a month or year. When the worker extends his labor beyond the limits of the normal period and works "overtime," he is usually paid an additional sum at the same rate or at an increased rate, such as time and one-half or some other multiple of the straight-time rate, unless he is receiving a salary. For holidays and Sundays, it is not an infrequent practice to pay the wage worker double time, although this is more common in times of great emergency than in periods of normal activity.

A comparison of the results of studies relating to the number of employees paid on time wages with those employed on extra financial incentives indicates that until quite recently there has been a general trend toward the substitution of financial incentives for time-wage systems. Data obtained from representative manufacturers of all sizes and types operating in and around the Chicago manufacturing district in 1922 and in 1932 are presented in the accompanying table. In view of the absence of more adequate

TABLE 8.—CHANGE IN THE DISTRIBUTION OF WAGE PLANS AMONG REPRESENTATIVE MANUFACTURERS IN THE VICINITY OF CHICAGO, 1922 AND 1932

Type of plan	Employees		Percentage of whole	
	1922	1932	1922	1932
Time wages	15,630	44,674	53.5	29.4
Extra-financial incentive	13,600	107,489	46.5	70.6
Total	29,230	152,163	100.0	100.0

SOURCE: Adapted from *Cost and Production Handbook*, 1934 ed., p. 615.

statistical data, it is difficult to say how far this movement has developed in the years following the great depression. It is interesting to note, however, that in several recent labor disputes, notably the Chrysler Corporation strike of 1937, one of the important demands won by the employees was that piece-rate systems be replaced by straight hourly wages. There is very little reason for believing that any significant swing away from piece-rate and bonus systems will take place in American industry in the near future, although changing trends may continue to be important within specific industries.[1] Differences in wage-payment practice for individual representative Chicago industries covered in the 1932 survey are indicated in Table 9.

TABLE 9.—DISTRIBUTION OF WORKERS COVERED BY WAGE-PAYMENT PLANS AMONG REPRESENTATIVE CHICAGO COMPANIES, 1932

Industry	Number of employees in per cent	
	On time wages	On extra-financial incentives
Meat packing	34	66
Food products	97	3
Candy	35	65
Tin cans	50	50
Electrical products	14	86
Precision equipment	16	84
Steel and iron foundries	29	71
Heavy equipment	33	67
Clothing and shoes	75	25
Printing	73	27

SOURCE: Adapted from *Cost and Production Handbook,* 1934 ed., p. 615.

More recent studies made by the Department of Labor substantiate the general pattern suggested by these data. In a survey of wage-payment practices of representative manufacturers, the largest proportion of workers on straight time was found in the automotive industry, and the largest proportion on individual piece rates was in the clothing industry.[2] Of the 631 manufacturing plants included in this study, only 129, or 20 per cent, reported material changes in their methods of wage payment from 1929 to 1935. Another study shows that premium and bonus plans are most popular in medium-sized plants.[1] In plants having from 250 to 1,000 employees, 23 per cent of the workers were under premium or bonus plans; in plants of from 1,000 to 5,000, 24 per cent were so classified; whereas 14 per cent of those in smaller plants and 20 per cent of those in larger plants were so covered. The National Industrial Conference Board estimates that in 1935 approximately 51 per cent of the employees in manufacturing industries were under time-wage systems.[2] Other recent studies also indicate definite trends toward wage incentive systems.[3] Despite these data, however, time-wage and salary payments are almost universal in practically all fields outside of manufacturing and selling.

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[1] Compare MORROW, L. C., "How 133 Plants Look at Wage Incentives," *Factory Management and Maintenance,* vol. 95, no. 10, October, 1937, pp. 75–77.

[2] United States Bureau of Labor Statistics, "Wage Payment Practices of Representative Manufacturers," *Monthly Labor Review,* vol. 41, September, 1935, pp. 697–700.

Time wages are essentially different in principle from other wage systems. In the payment of time wages, no conscious daily check up is made upon the production maintained; in fact, in most cases of time payments such a check up is impossible. Usually general occupational classifications are drawn up. An office employee doing a certain type of clerical work will receive one time-wage rate, or weekly or monthly salary, and will be advanced in salary according to a schedule determined by such factors as an estimate of the worker's general production capacities and length of service. Within each wage or salary group, the hourly, weekly, or monthly rate remains invariable until a new classification can be attained. No definite and direct relationship exists between wages and production. The employer takes all the responsibility for the employee's productivity; he, not the worker, shares in the gain of competency or the loss of incompetency until a new classification is made.

Evaluation of the Time-wage Principle.—The time wage offers some advantages to both employer and employee. The great appeal of the day-rate system to the worker lies in the considerable measure of certainty and security which it provides. He knows exactly what income he will receive for the time he puts in. All responsibility for supervision and output are placed upon the shoulders of the employer. The employer who finds it impossible to supervise all the work delegates this function to supervisors, departmental chiefs, foremen, and subbosses, upon whose cooperation he must rely for the achievement of quality and quantity output. So long as he maintains a satisfactory standard of efficiency, the laborer need not fear discharge. Within certain limits, except in operating a timed machine at work along a set-speed conveyor assembly line, or under an excessively rigid system of discipline and supervision, he can control the pace of production and "nurse" the job. There is no question that the average workman favors the day-rate system for these reasons. Trade unions favor it because it makes easy and possible the maintenance of the standard rate which they set in joint negotiations with the employer. Effective collective bargaining would be difficult, if not impossible, should any member of the union be free at any time to accept a wage below the established standard. This would reintroduce the competitive element against which unions are organized. Although it must be remembered that labor organizations seek merely to obtain the full competitive rate and do not prevent the employer from paying to the exceptional worker rates above the standard, it cannot be denied that frequently substandard workers gain entrance into unions and receive higher wages than their efficiency would justly allow.

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[1] "Bonus Plans on the Increase," *Factory Management and Maintenance*, vol. 93, August, 1935, p. 327.

[2] National Industrial Conference Board, *Study of Financial Incentives* (1935).

[3] See *Factory and Industrial Management*, vol. 80, March, 1931, pp. 411–413; vol. 75, March, 1928, pp. 556–557; vol. 80, September, 1930, pp. 527–528; and Society of Industrial Engineers, "Trends in Industry," *Report of the Proceedings of the 15th National Convention*, 1929, pp. 34–54.

To the exceptional worker, no such advantages accrue. Under the day-wage system, no distinction is ordinarily made between the proficient workman who turns out a good day's work, whether measured in terms of quality or quantity, and the inefficient, lazy individual who consciously aims to do just enough work to avoid discharge. This situation doubtless tends to have an unfavorable reaction upon the whole group. Because it provides no direct stimulus to efficiency, other than the chance of promotion, a possible advance in wage rates, and fear of discharge, the time-rate system encourages an attitude of indifference and passiveness. Even the exceptional workman tends to adjust his pace to that of the ordinary and inefficient ones.

From the standpoint of the employer, it is a debatable question whether the advantages and disadvantages of the time-rate system balance each other. Such a plan of payment tends to improve the quality of workmanship and the output. The worker is not rushed or speeded up so much as under other systems, so that there is ample opportunity for self-expression and creative workmanship in those occupations that have not come under the dulling regime of minute specialization and monotonous, repetitious tasks. In refutation of this contention, of course, it may be argued that under the newer wage systems effective supervision and proper incentives assure quality of workmanship without the necessity of a time rate.

The day-wage plan is doubtless simple and easy to apply. No difficult mathematical determinations of base and bonus rates are involved and job analysis is not imperative. The worker can calculate his earnings without the danger of misunderstanding. It is easy to make up the payroll on the basis of general occupational classification and the attendance records. Time-wage payment is the only possible system adaptable to work which is of such a miscellaneous character as to make standardization impossible.

On the other hand, the day-wage or monthly salary system has conspicuous disadvantages for the employer. Since it contains no inherent incentive to efficient work, the employer must provide adequate supervision in order to maintain desirable standards of efficiency. This enhances the cost of production. Where the plant is unionized, the standard day rate generally implies conformity to the standard rate set jointly by management and the representatives of the union. This may involve definite restrictions upon the employer's right to bargain freely with each worker, and, in unreasonable cases, it prevents the discharge of incompetent workers. Such a situation implies deficiencies in methods of collective bargaining, which are being remedied by intelligent unions, rather than any inherent weakness in the day-wage method of payment.

Still another disadvantage from the point of view of the employer is the uncertainty of costs under the time-rate system. There is no question that under this plan of remuneration output varies greatly from employee to employee and from day to day. There are definite limits to the management's power in driving the working force. All this means that wages constitute a variable item in the cost of production, making it difficult to predetermine costs and fix future selling prices over any considerable length of time.

The most serious charge made against time-wage and salary-payment plans is that they offer no real incentive to maximum effort on the part of the worker; hence, they lead to lower individual production and considerable economic and social waste. This charge is made under the assumption that individuals are inclined to do only the minimum they are compelled to do, or feel compelled to do. Unfortunately, this is often the case in every type of employment activity; in so far as it is true, the criticism is a valid one. There are, however, numerous forces which lead individuals to put forth their best effort even though they may know that at the end of the day or the week their paychecks will be no larger as a result of increased productivity. Where there is a keen sense of pride in workmanship, a conscious desire to do one's best, a competitive spirit to excel, a feeling of satisfaction at having done well in one's work, or the thought of material gains through future promotion, time wage payment may prove to be an effective spur to productivity. In such cases many of the ordinary weaknesses of the time-wage system are counterbalanced.

Piece-rate Schemes: Ordinary Plan.—The straight piece wage is the oldest of the efficiency wage plans and ranks second to the day-wage system in point of time of application. In principle, it is quite contrary to that of time-wage payments. Under this system, the employee shares in his increased or decreased productivity, because a price is determined for a given operation or unit of product, and that rate is paid regardless of the period of time consumed in the completion of the task. Thus, with a large output goes a large reward; a small output is accompanied by a small reward. When an organization has substituted the piece-rate plan for the time-rate plan, it has been customary to determine piece rates on the basis of the day-wage standards in operation previous to the change in method of payment. Consequently, the piece rates have been set at a point which would yield approximately the same income for the same performance, the chief gain to the employer accruing from the speeding up or the elimination of substandard workers who under the day-wage plan are paid out of proportion to their output. In some instances, an attempt has been made to fix the piece rate at what is considered a "fair" or "just" level for standard performance. The determination of such levels has usually been based upon the performance of one or more workers selected for the purpose. Human judgment as to what constitutes a reasonable time and a reasonable rate enters largely into the calculations of piece rates under this system.

Under the piece-rate system, the necessity for close and efficient managerial supervision is considerably lessened, since the worker must now assume responsibility for the economical and effective use of his time. Whatever reduces the period of time required for the worker's completion of the set task (whether it be his own faster pace and improved efficiency or technical improvements introduced by the employer) invariably tends to increase his output and earnings. Should the workman consciously slow down his pace or become indifferent to his efficiency, his production will be automatically reduced because of the greater amount of time required for the completion of the task. All of this tends to result in the assumption of supervisory functions by the workers and in the stimulation of their interest in the technical problems of management. Adequate supplies of good raw materials, proper scheduling and routing, well-conditioned machinery, improved tools and equipment, and similar requisites of efficient production become a vital concern to the workers under the piece-rate plan.

The piece-rate system presents obvious advantages to the worker and the employer. In contradistinction to the time-rate plan, the superior ability and performance of the exceptional workman are recognized and compensated in definite financial returns. The piece-rate system provides an incentive to output and places a check upon soldiering. The fast, efficient workman forges ahead of his fellows and in doing so raises the general standard of output and earnings. Moreover, a creative interest in the job and a constructive interest in the problems of management result, thus eliminating some of the tedium and monotony of the daily grind. To increase his earnings the worker often studies his job and seeks to devise ways and means of facilitating output. In an investigation of manufacturing plants made by the National Industrial Conference Board it was found that the introduction of piece rate systems led to an actual average increase in output of 30 per cent, an increase in average earnings of 25 per cent, and a decrease in per unit production costs of 21 per cent in the 1,214 plants, employing 777,376 workers, included in the study. Individual plants reported increases in output ranging from 10 to 400 per cent; increased earnings ranging between 10 and 199 per cent; and decreased unit costs of between 10 and 50 per cent.[1]

The employer finds his advantages in the relaxation and economy which come from the shifting of responsibility for production from his own shoulders to those of the working force; the certainty of labor costs which results from the fixed rate per job or per piece; the elimination of substandard workers who find it impossible to maintain efficient output and can no longer hide their deficiencies under the efficient efforts of superior and conscientious workmen; the lower costs and larger product which normally accrue; the possibility of predetermining labor and other production costs and so contracting for future deliveries at specified selling prices; and the reduction in the degree of confusion in organization and daily work schedules brought on through absenteeism and tardiness.

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[1] National Industrial Conference Board, *Systems of Wage Payments*, p. 37.

The piece-rate system, however, is not without its marked disadvantages. This system has some tendency to divert the attention of management away from improved technique of production and progressive methods of labor management. Relieved of the responsibility of close supervision, there is grave danger that management will devote less time and energy to the ways and means of improving the details of organization and operation, and disregard possible improvements in human administration which are not obtainable or measurable in terms of wages. This danger has been accentuated where organized labor has opposed a cut in the piece rates, even when the greater output was the result of technical changes rather than of increased effort on the part of the workers. It has been stated that "Under average conditions, with piece-work, about 88 per cent of the benefit of all improvements affecting the rate of production accrues to labor, and 12 per cent to management."[1] The piece-rate system, moreover, tends to encourage the conviction among the workers that they have a vested interest in established rates, regardless of revisions made necessary by technical improvements.

The greatest deficiency of the piece-rate system, from the point of view of the workers, is the tendency of management to cut the rates upon the least excuse or with no excuse at all, except that the employees are making too high wages. The system has frequently been abused. Where piece rates have been established and a large production has resulted in correspondingly large income for the workers, management has often cut the rates because it feared the results of allowing the piece-rate wage to depart too far from ordinary levels for the same or similar work in other plants. The net effect of such a practice is that the workers, especially those who bargain collectively, develop a relentless antagonism toward any form of piece-rate payment. Those who are operating under such a system oppose rate cuts on general principle, even though such a revision may justly be warranted by technical changes which make increased output possible. The workers argue, not without justification, that management is unwilling to pay more for large production than for small production, although the larger output reduces the overhead charges per unit of product and so enhances profits per piece.

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[1] JONES, E. D., *The Administration of Industrial Enterprises*, 1st ed., p. 251.

This deficiency of the piece-rate method of payment develops from the *abuse* rather than the *use* of such a system, and can easily be eliminated if management so desires. If rates are established, they should be guaranteed until the nature of the work, the tools, or the materials are changed. The following principles should govern rate determinations and revisions:

1. When greater production is the result of greater application and effort and the exercise of greater intelligence on the part of the workers, there should be no objection to increased total earnings per man, and rates should not be revised.
2. When increased output and earnings are the effect of technical changes introduced by management, such as a change in the ratio of machine work to hand work in the operation, there is justification for rate adjustments.
3. When the income of pieceworkers is extraordinarily high or low compared with the earnings of other employees who spend the same amount of time, energy, skill, and intelligence on their work, even if the ratio of mechanical to human factors remains the same, there is reason for consideration of rate revision. In other words, if the earnings under established rates are inadequate to maintain a decent standard of living, or if they are so high as to be out of any reasonable proportion to the amount of effort, intelligence, or skill involved, readjustment in rates is not objectionable.
4. Original rates should be set and all revisions made by joint committees of representatives of management and men cooperating with the rate-setting expert. This will create confidence in the plan, promote justice, and preclude abuses.

The piece-rate system offers other disadvantages and limitations. It tends to sacrifice quality to quantity of product. The workers seek to get out the largest possible number of pieces or to complete the task in the shortest possible time, regardless of the quality. Depreciation of machinery and equipment tends to be excessively rapid because of the abnormal speed and wear and tear. This entails high replacement costs. The worker is not assured a minimum of earnings, so his insecurity is enhanced; he may not receive enough to maintain his customary standard of living, especially if rates are arbitrarily manipulated by the employer to reduce the earnings of the workman, or if he is a beginner. The speeding-up process, which frequently attends piece-rate systems, has deleterious effects upon the health of the worker because of resultant fatigue and the accumulation of fatigue poisons. Piece rates tend to be characterized by a certain degree of inelasticity since, when they are once established, it is difficult to change them, regardless of variations in the cost of living and in industrial earnings caused by alternating periods of business expansion and recession.

Choosing the original rate or the basis of the piece rate offers many practical difficulties. Unavoidable delays, over which the worker has no control, are often not compensated; the plans are often complicated and confusing to the worker; and seldom does the piece-rate plan recognize intangible qualities of the worker, aside from productivity, which at times can. mean the difference between a satisfactory and an unsatisfactory employee. In the face of all the limitations, however, it is often possible to adjust the piece-rate system to the particular organization either through scientific time study or through a minimum-wage guarantee. Under these conditions, many of the weaknesses may be overcome and the plan may be made to work successfully.

Guaranteed Straight Time-wage Plan.—A significant development in the application of the principle of time pay has been the introduction of the guaranteed straight time wage or the guaranteed annual salary plan adopted in several leading organizations throughout the country. In August, 1923, all employees who had been with Procter & Gamble Company for a period of at least 2 years were guaranteed a minimum annual income of 48 weeks' work with pay. This guarantee plan has more recently been extended to cover a period of 50 weeks within the year to all those with a record of at least 1 year of service. The employees of the incandescent lamp division of General Electric Corporation were first guaranteed 50 weeks of 30 hours work each per year in 1931. The plan has been changed to a guarantee of 1,500 hours, in order to allow for greater flexibility.[1] The Hormel Packing Company placed part of its employees on a definite pay-check basis in 1933, under which employees received a weekly check regardless of the number of hours worked.[2] By 1935, about, 1,436 out of 2,400 in one plant were under this wage-guarantee plan, and by the end of 1936 approximately 56 per cent of the employees were on guaranteed straight time.[3]

The income of employees of the Patterson Manufacturing Company of Dennison, Ohio, is averaged over 52 weeks each year. This amount is paid weekly even though work is not being done.[4] The Nunn-Bush Shoe Company employees are guaranteed 52 paychecks each year, the amount per week being determined by the average previous earnings over 48 weeks. Under this plan actual employment in excess of 48 weeks during any year is paid for as extra time, the guarantee covering 1,920 hours per year.[1] Obviously, such plans are not needed in most service industries where commodity production is not the major activity, but the application of this simple guarantee method offers real possibilities to millions of employees in thousands of organizations such as retail merchandising firms, offices, and manufacturing companies.

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[1] BALDERSTON, C. C., *Executive Guidance of Industrial Relations*, p. 87.

[2] *Factory Management and Maintenance*, vol. 93, August, 1935, pp. 323–325.

[3] *Ibid.*, vol. 94, December, 1936, pp. 43–44; and *The Literary Digest*, Dec. 25, 1937, pp. 14–15.

[4] "Fifty-two Payment Plan Smooths Seasonal Employment," *Factory Management and Maintenance*, vol. 95, July, 1937, p. 124.

Group Time or Bonus System.—Under certain conditions, it is wise to offer wages to groups of between five and fifty workers instead of individually. Under this plan a standard task is usually set by careful time-study analysis. The standard task is then multiplied by the number of workers in the group, and the group task becomes standard. All production by various members of the group is pooled, and wage payments in the form of bonuses are prorated to the members upon a basis of the actual production in excess of the standard. Sometimes, as in the case of the Westinghouse Electric and Manufacturing Company, the total group earnings are divided among the members in proportion to the time and base rate of each individual.[2] Suppose, for instance, that a five-man group is made up of *A*, *B*, *C*, *D*, and *E*, and that a two-week pay period of 75 hours has been established. If *A* and *B* have worked 75 hours, *C*, 60 hours, *D*, 55 hours, and *E*, 65 hours, the total man-hours of the group would be 330. If, under these conditions, it is assumed that the total standard time allowed for the work of this group is 445 hours, then the group efficiency would be computed as 445 divided by 330 or 135 per cent. Under the assumption that the rates of the men are those indicated below, then earnings within the group would be:

Man	Day-work rate per hour, cents	Standard time rate per hour, cents	Individual earnings
A	54	60	75 × 135% × 60¢ = $60.68
B	45	50	75 × 135% × 50¢ = 50.57
C	40	45	60 × 135% × 45¢ = 36.41
D	45	50	55 × 135% × 55¢ = 37.08
E	54	60	65 × 135% × 60¢ = 52.59

A somewhat similar system has been used in the tool room of the Graham Paige Motors Corporation since 1923. In this company guaranteed day rates are paid when actual production time falls below that established as the standard group task.[1] Another group plan quite similar to this has been used by the Western Electric Company.[2] In 1924, the National Cash Register Company adopted a group-payment plan whereby standards were expressed in decimal hours per 100 units. Performance of the average worker was taken to be 75 per cent efficient. Above this point, a 1 per cent bonus was paid for each 1 per cent increase, and the efficiency was computed as the ratio of group output to input in hours.[3] The plan was later modified but in principle has remained the same. This company experienced a reduction in the cost of direct labor of between 25 and 50 per cent when the day-wage system was abandoned.

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[1] *Factory Management and Maintenance*, vol. 93, August, 1935, pp. 331–332.

[2] Westinghouse Electrical and Manufacturing Company, "Wage Administration," *Industrial Relations Manual*, April, 1935.

Many other variations of the group-bonus system are in use today, notably among such companies as Chrysler Motors Corporation, Goodyear Tire and Rubber Company, and other industrial organizations. A group plan known as "cooperative production" has met with success in England.[4] Under this plan, a standard period is taken and the production at the end of every 4 weeks is compared with the standard production. Output is reduced to the equivalent of points, and its value must exceed the standard number of points if the workers are to receive a group bonus. Every employee in the organization receives his prorated share of the bonus depending upon the amount of the regular wage, and payment is independent of the company's earnings. In the application of this scheme, a list is made of all commodities manufactured during a specified period (preferably 2 years). These are then classified to determine the labor value of each class, so that the time spent in production can be reduced to a skilled man-hour basis. Each article is then assigned a point value depending upon the number of man-hours it represents and the number of these points above the standard over specified periods of time determines the size of the bonus distributed.

Group bonuses find little applicability outside of manufacturing organizations. Here, however, numerous instances of increased production and greater efficiency could be cited. Doubtless their strongest field of application is in the type of industry where specialization methods allow the use of the conveyor belt; where minute division of labor requires expert skill; where the presence of overhead costs is instrumental in reducing the expense of individual record keeping or where greater flexibility in the incentive is sought. Often it is possible to secure increased effort through group action where individual incentive might retard efficiency because of the fear of time study and rate cutting. Under a group-bonus system, a change in the wage scale can be made by simple adjustments in the base rates of any of the employees desired without influencing the wages of others. Group systems further reduce supervision needs; create close cooperation among group members; simplify time-study, time-keeping, and cost-accounting work; lead to better quality with less inspection; and, in general, make for better working conditions and an opportunity for increased earnings.

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[1] *Factory Management and Maintenance*, vol. 95, July, 1937, pp. 65–66.

[2] *Manufacturing Industries*, vol. 16, August, 1928, pp. 273–278.

[3] *American Management Association, Production Executives' Series* 73, pp. 7–18.

[4] United States Bureau of Labor Statistics, *Monthly Labor Review*, vol. 26, March, 1928, pp. 500–504.

Profit Sharing.—When an employer gives his employees a share in the net earnings of the enterprise in addition to their regular wage, a profit-sharing plan is being applied. According to the fundamental principles of pure profit sharing, the amounts to be distributed among the participants should come principally from the net earnings of the enterprise, the proportion or percentage of the earnings to be apportioned to each employee should be designated in advance, and the benefits of the scheme should be accorded to at least one-third of the regular wage-earning or salaried employees.

Profit sharing as a method of industrial remuneration is among the oldest attempts to depart from the ordinary wage systems or to supplement them, going back as far as 1829 in Great Britain, 1842 in France, and 1886 in the United States,[1] the countries in which it has had the widest application. Sharing profits with employees has been inaugurated by employers in the hope of achieving one or more of several purposes. These include the promotion of industrial efficiency; the cultivation of peaceful relations; the encouragement of economy in the use of materials, machinery, and equipment; the development of industrial responsibility on the part of wage-earning groups; and the promotion of loyalty to the job and the enterprise. In some cases, other ends have been desired. Some companies have found such schemes a valuable aid to effective advertising and publicity. Others have consciously used them to counteract the influence of organized labor and to prevent the introduction of collective bargaining. Still others have discovered in profit sharing one way of assuring a measure of economic and social justice.

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[1] The N. O. Nelson Company of St. Louis. This plan has been in operation without interruption for 51 years. For a short history of the development of profit sharing in the United States, see particularly National Industrial Conference Board, *Profit Sharing*, 1935, p. 3.

There are normally five ways of distributing profits among employees under profit-sharing plans. Profit sharing may be experienced by means of the sharing of the net profit of the enterprise in regular cash distributions or arbitrary informal bonuses; participation in a special welfare or pension fund established out of company profits; distribution of stock; departmental gain sharing; and unit-profit sharing. Only the first three methods are important enough to warrant consideration here.

Net earnings may be distributed in the form of cash payments at the end of a specified period. Sometimes this policy is publicly announced among employees, as in the case of the White King Soap Company, where, for years, it has been the practice to distribute, at the end of the year, checks ranging between $100 and $300 per worker, depending upon the profits of the company. More often, however, such action is announced voluntarily toward the end of the year as a surprise to the workers. The Allis Chalmers Manufacturing Company announced that each member of the work force employed on hourly, piece-work, and standard-time basis was to receive on Dec. 23, 1936, a bonus of 3 per cent on earnings for all full-pay periods during the last 10 months of the year.[1] In February, 1935, the Chrysler Corporation announced a fund of $2,300,000 had been set aside out of earnings to distribute among employees on the company's payroll during the first 3 months of 1935. A minimum of $30, plus $2 extra for every year of service up to 16 years, was allowed, and plans for future profit sharing were announced.[2] The Eastman Kodak Company has extended cash profit-sharing bonuses to all employees working during a part of at least 26 weeks during the year,[3] while the Endicott Johnson Shoe Company has followed the policy of splitting net profits after taxes and dividends with the employees whenever earnings are sufficient.[4] During the 10-year period ending in 1928, over $13,000,000 were thus distributed. Employees of the Kansas City Public Service Company for years shared quarterly in the profits of their organization but more recently have voted to buy bonds of the company rather than to receive cash payments.[5]

[1] *Management Review*, vol. 25, November, 1936, pp. 349–351.

[2] *Ibid.*

[3] *Ibid.;* also *Factory Management and Maintenance Supplement*, vol. 95, February, 1937, pp. 367–368.

[4] National Industrial Conference Board, *Memorandum* 52, Oct. 1, 1936.

[5] United States Bureau of Labor Statistics, *Monthly Labor Review*, vol. 32, May, 1931, pp. 1069–1070.

In practically every country, actual cash disbursements have proved the most acceptable and successful of all the methods, because the workers much prefer to receive their supplementary income at frequent intervals, such as at every quarter or every 6 months. Annual payments are less popular because realization on his efforts seems remote to the worker. The scheme is thus deprived of its incentive value and so defeats its primary purpose, which usually is to increase output. The principal objection to cash payments is that the employer has no assurance that the additional income is being used wisely. The cash bonus has been rather successfully applied in Great Britain, where at least two-thirds of the plans operate on this basis, but in the United States cash payments appear to have been less satisfactory than any of the various forms of stock distribution.

The distribution of profits may be made under a deferred plan, in which case the profits to be divided are placed in a savings account, annuity fund, pension fund, or other account to be drawn upon at some future date. The worker's share in profits thus remains in the capital of the enterprise and draws interest. He may obtain his accumulated savings upon attaining a certain age, after a certain period of service with the company, or in the case of a serious emergency. On the other hand, if he is dishonorably discharged or goes out on strike, he may be denied participation in the accumulated fund. In some cases, separation from the service of the company because of illness or for some other good reason does not deprive a man of his share. This method of profit sharing, which has met with considerable success in France, has not appealed so generally to American wage earners. The plan has not provided the incentive to efficiency and good will which was expected of it, largely because of the feature of indefinite postponement.

Participation in profits quite commonly takes the form of stock distribution. Some corporations make distribution of stock in recognition of superior service over a certain period of years; others make it possible for their workers to purchase the shares of the company on the installment plan at a price somewhat below the market quotation, the payments being made by either full or partial deductions from the employee's wage. Sears, Roebuck and Co., for example, has a voluntary profit sharing plan making possible stock purchase which has been taken advantage of by some 95 per cent of the employees.[1] Under this scheme the worker is eligible after 3 years of service, at which time 5 per cent of his wages are deducted and matched with another 5 per cent from the profits of the company. This is invested in company stock, and dividends may be used to buy more stock. During 1936, the company contributed $1,699,647 under the plan. Withdrawals are permitted after 10 years of service (5 years for women getting married), but they can be made prior to this time, in which case the employee receives his own investment plus 5 per cent compounded interest. This is only typical of various similar plans available to thousands of employees in practically every line of industrial activity. Here, it will be noted, profit-sharing schemes continue to be applicable only to profit-making organizations.

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[1] FRAILEY, L. E., "A Profit Sharing Plan That Works," *American Business*, vol. 7, May, 1937, pp. 15–6.

Under both of these conditions the number of shares apportioned to each worker is definitely limited and determined usually on the basis of earnings. Such stock may or may not carry voting rights, and is often not transferable except to fellow employees or to the company. This form of profit sharing is rather common and successful in the United States, although the number of eligible employees who take advantage of the opportunity to purchase stock is not nearly so large as might be expected. There has been some danger of overcapitalization on account of stock distribution to employees. Moreover, it has been difficult to educate the workers to the necessity and wisdom of retaining their stock.

The amount of additional income distributed among employees under profit-sharing plans varies with different companies. It consists usually of a certain percentage of the net earnings for the year preceding the date of distribution, although in some cases division takes place quarterly or semiannually. As a rule, the amount assigned to each worker is in direct proportion to his annual earnings, exclusive of overtime and piecework income. In the United States, the share has averaged between 10 and 12 per cent of annual wages.

Eligibility to participation in the profit-sharing plan usually rests upon a good service record with the company for a certain period ranging from 1 month to 5 years or more.[1] Occasionally provision is made for a reduced bonus to employees who have been with the firm for a short period. In many companies, participation is denied certain classes of employees, such as those below a specified age, those receiving a high wage or salary, or those working on a commission basis. Membership in a trade union has sometimes been a basis of disqualification, although in some English plans union membership is compulsory. The company usually reserves the right to deny participation to employees who have been disciplined for infraction of shop rules, inefficiency, habitual tardiness or absence, or any other deficiency.

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[1] United States Bureau of Labor Statistics, "Sharing Profits with Employees," *Monthly Labor Review*, vol. 30, March, 1930, p. 585.

The experience of industry in the United States and abroad is not reassuring with regard to the efficacy of profit-sharing plans as an incentive to efficiency and good will. While there have been notable examples of the excellence and practicability of such schemes, the mortality rate has been excessively high. Many corporations have abandoned their plans either because the results did not justify the financial outlay or because the employees did not react favorably to them. Other causes of failure have been the opposition of trade unions, the tendency of workers to become indifferent to the scheme after the novelty has worn off, the fact that wage earners cannot and do not want to become risk takers, and their tendency to look upon bonuses as a vested right regardless of cooperation in the task of production. Unions prefer that profits be shared in the form of fixed wages. They fear the adverse influence of profit-sharing schemes upon the aggressiveness of workers in matters of collective bargaining and strikes. On the other hand, many employers oppose profit sharing because it involves no responsibility on the part of the employee for losses and because the business cycle makes the possibility of payment too uncertain to serve as a genuine financial incentive for increased productivity.

Many corporations which have conscientiously applied profit-sharing schemes praise them as conducive to reduction in labor turnover, improvement in attendance records, decrease in production costs effected through more careful and economical use of materials and equipment, increase in general efficiency of the organization, encouragement of thrift, and promotion of cordial relationships, with resultant industrial peace. Such success, however, has always been the consequence of scrupulous attention to the basic principles underlying pure profit-sharing plans. In every case, success will be contingent upon the following: the payment of current wage rates for all classes of labor employed by the company; the exact determination *in advance* of the percentage of profits that is to be divided with the workers; joint representation of management and men on the administrative committee which controls and administers the plan; proper adjustment of the scheme to the peculiar conditions existing in the establishment; careful education of the employees with regard to the nature and implications of profit-sharing plans; and the existence of sufficiently high net earnings to provide a bonus that will stimulate interest, efficiency, and cooperation. When inaugurated and administered on this basis, profit sharing will do much to provide added incentive to industrial effort and will be an aid to the realization of economic justice.

The Sliding Scale.—Under the sliding-scale method of wage payment, wages and salaries are made to rise and fall in proportion to the changes in the general level of prices. This method is based upon the belief that wages should be determined by either the selling price of the product or the general level of prices. Its principal application has been in industries, such as coal and metal mining, the price of whose products tends to fluctuate considerably. It is usually administered under some form of collective agreement between trade unions and organizations of employers in a given industry. It is customary to set a standard basic rate for the unit of product, as a ton of coal, and to provide that, at stated intervals, usually every 6 months or a year, wages shall be revised according to readjustments in the selling price. Thus, if the miner is being paid a standard rate of $2 a ton for coal when the market price is $3 and by the end of the revision period the selling price has advanced to $4, his wage will be increased by a certain percentage specified in the trade agreement, say 50 per cent of the increased selling increment, or 50 cents a ton. A similar readjustment is made if the market price falls by the end of the revision period. The relative percentage of the increase or decrease that shall go to wages and profits is ordinarily determined on a basis that will assure adherence to and fulfillment of the contract by both employers and trade unions.

The plan has received its widest application in Great Britain, especially in coal and metal mining. Growing opposition of trade unions, which now insist more upon a minimum living wage, has resulted in the almost complete abandonment of the sliding scale in British industries. In the United States, the plan has been adopted in the basic processes of iron and steel manufacturing, but it has never enjoyed prominence in this country. Two recently announced plans have gained rather wide publicity in the United States. On Nov. 15, 1936, a sliding-scale wage plan went into operation among employees of the United States Steel Corporation, whereby wages are made to vary according to living costs, with the period 1923–1925 being taken as a base of 100. New wage rates were 10 per cent higher than those previously in effect, thus compensating for a 10 per cent increase in living costs. No adjustments either upward or downward are made until changes reach 5 per cent of the former level.[1] In October, 1936, the General Electric Company announced a somewhat similar plan except that pay increases are to be made up to but not exceeding 10 per cent above the wage level and not below the amounts being paid at the time the plan became effective. Beyond these limits the plan is subject to further modification and acceptance by employer and employees.[2] The scheme pertains to the first $3,000 per year of all employees receiving earnings not exceeding $4,000 per year.

Any plan attempting to adjust wage rates automatically involves considerable difficulty. Especially is this true when wage rates are anchored upon the selling price of a product. Organizations of employers and employees must be strong enough to enforce decisions and have adequate facilities for the collection, tabulation, and interpretation of price data. In the absence of such agencies, an approximation to fair play and justice is almost impossible. The determination of an acceptable base or standard for the normal wage and the normal price is not an easy matter. Anything, such as cutthroat competition, which tends to interfere with normal price levels for the product will magnify this difficulty. Consequently, the greater the degree of cooperation among producers, whether secured through informal open-price associations or the more formal interlocking directorates, the greater the standardization and control of prices. Although this may stabilize both wages and prices, it also makes possible unscrupulous manipulation of both. To adjust wage levels on the basis of price fluctuations for any single product is manifestly precarious. It is quite conceivable that the price of coal, for instance, may rise at the same time that the general level of other commodity prices is falling, or vice versa. Such a condition tends to encourage agitation for "illegal" readjustment. Employers do not normally enjoy paying high wages when the general level is low, regardless of the justification found in the exceptional price level in the case of their particular product. Similarly, no group of wage earners passively accepts low wages in its own occupation when the general scale for other occupations is relatively high.

[1] "How Index Figure May Affect Wages," *Steel*, vol. 99, Nov. 16, 1936, pp. 23–24.

[2] "General Electric Adjusts Earnings," *Iron Age*, vol. 138, Oct. 15, 1936, p. 237.

The difficulty of forecasting commodity prices entails possible loss for both employers and workers under the sliding-scale arrangement. The base rate may be set at a fairly low level in anticipation of an upward trend in prices which may not take place. In this case the workers incur distinct loss and privation, especially if the price of their particular product remains low while the general level of prices rises, causing a general increase in the cost of living. Moreover, individual mills and mines may continue to fill previously negotiated contracts at low prices long after the price on the general market has advanced, although cancellation of contracts tends to counteract this difficulty. Cancellation of contracts, however, is not conducive to customers' good will. Customers are more likely to cancel contracts than are producers, so that the employer stands little chance of making wider margins of profit through high-price contracts before a drop in prices. The way out of this difficulty is to limit the time during which contracts are allowed to affect wage rates and to shorten the period of revision. But frequent revision defeats a major purpose of the system, which is to assure a measure of security for employers and employees.

Finally, the sliding scale does not, any more than other methods of payment, preclude the necessity of periodical reconsideration and readjustment of wage rates. Evolutionary changes in industry, such as new or improved processes, machines, equipment, and tools; conspicuous changes in the cost of raw materials and equipment; seasonal or periodical changes in business conditions with consequent changes in the labor supply; the emergence of new competitive factors, such as substitute products and the opening up of new competitive areas; and the instability of the price of commodities and services which causes variations in the cost of living—all tend to unsettle the foundations of sliding-scale agreements and to compel frequent revision of rates.

Notwithstanding these difficulties and deficiencies, the sliding-scale system possesses some virtues. The determination of wage scales for a definite period of time certainly tends to reduce the cause and possibility of disputes in the industry in which such determination is made. As in the case of piece rates, the sliding scale introduced an element of certainty into production costs, thus enabling the employer to predetermine approximate costs of operation for the period and so to accept long-term contracts. This creates a feeling of security which is conspicuously lacking where no binding wage agreements are negotiated. There is reason to believe, also, that the employer benefits from the fact that the sliding scale tends to promote the worker's interest in the necessary relation between the price of the product and the wages that can be paid in the industry. Both employers and workers find an advantage in the elimination of arbitrary and abrupt modifications of the wage rates. Here is at least a measure of economic security for both. The employer does not have to fear that during the tenure of the agreement wage scales will soar to unreasonable heights; the worker need not fear that during the same period his wage will be spontaneously reduced to levels which do not warrant the maintenance of his customary standard of living.

The recent movement for adjusting wages to the cost of living is a tacit recognition of the basic principle which underlies the sliding scale, and the sliding scale itself is a recognition of the justice of sharing profits with the workers. It is doubtful, however, if this method of industrial remuneration will receive serious attention by a large number of American manufacturers, even in those industries, such as coal and steel, to which it might logically be applied, unless or until such action is made obligatory by some forms of state or federal legislation.

The Problem of Rate Setting.—Individual organizations may differ considerably in the type of wage and salary payment plans which they use, but all types of organizations—religious, professional, merchandising, office, sales, civil service, commercial, financial, and industrial—constantly face the necessity of setting wage and salary rates. Usually the wages or salaries paid in a given organization are related in a varying degree to the wages paid for common labor.

There are several reasons why wages and salaries may not be uniform within any given organization. First, the company may be scattered throughout a wide area with branch stores or offices located in various parts of the country where market wages and living costs vary considerably. Then, there are bound to be many irregularities in any wage scale involving a relatively large number of employees within an individual company, unless a systematic study of wages has been made and wage control centralized. Many inconsistencies develop between the same or similar grades of workers, departments, and even the same grades of workers within a single department, unless an effective system of coordination and control has been introduced. One writer has stated, "As long as such conditions exist some individuals will draw more than their share of the pay roll, and others less. It is folly to assume that the personnel will not sense these inequalities and react in loss of faith, confidence, loyalty, and cooperation. A well-balanced distribution is vital in the economics of labor relations in every organization."[1] The urgent need for a scientific approach to this problem is suggested by the organization of the Westinghouse Electric and Manufacturing Company, with its more than 8,000 salaried employees in a thousand or more classifications scattered in thirteen manufacturing points and ninety-six major centers of distribution and service;[2] or by the county governments embracing some of our large industrial cities, as for example, the County of Los Angeles, with its 18,000 wage and salaried employees falling within over 3,500 specifications.

Salary Standardization.—Wage and salary standardization is the grading of jobs, and the establishment and maintenance of wage limits for each classification of positions.[3] Many organizations have applied scientific methods in the determination of wages, but only a few have attempted to devise similar techniques for establishing salaries. As the executive of one company states:

> When an organization becomes as large as this company, the administration of salary and promotion ceases to be the function of a proprietary individual and becomes a problem to be handled scientifically, if it is to be fair. This means a systematic plan, because salary and promotion are the two most vital factors of good personnel management. . . . Every employee desires a fair salary and a fair chance of promotion. The consideration of seniority, influence, and personality should not be major influences in the determination of salary increases and promotion, which should be based primarily on merit, past performance, and the value of the work to the company. Otherwise you have a discouraged and disgruntled personnel doing mediocre work.[4]

In view of the recognized need for such action, however, it is disappointing to find so few who are seeking a solution of the problem. Even where schematic procedures are found, standardization is limited to positions paying a maximum of $300 per month; only rarely are salaries of $5,000 and $6,000 per year included. In a comprehensive study of classification and compensation plans for library positions, the Bureau of Public Personnel Administration reported:[1]

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[1] Hopwood, J. O., "Job Analysis and Classification in Payroll Administration," *Harvard Business Review*, vol. 14, January, 1935, p. 152.

[2] Westinghouse Electric and Manufacturing Company, "Salaried Employment Policy," *Industrial Relations Manual*, August, 1936.

[3] See Metropolitan Life Insurance Company, *Salary Standardization and Administration*, 1934, p. 1.

[4] *Ibid*, p. 3.

> 1. That the compensation for positions involving the performance of similar duties and the exercise of equal responsibilities and calling for the same qualifications showed wide variations and marked inequalities *within the same libraries*, and still wider variations and inequalities between libraries in different communities.
> 2. That the general level of compensation for library workers of practically all grades was low.
> 3. That there were many inequalities in the relative rates of compensation for different classes of library workers.
> 4. That no comprehensive classification or job analysis of library positions for use in fixing rates of compensation, in testing, certifying, and training employees, in handling transfers, and in many other tasks had been made and put into effect.

Fortunately, out of this particular investigation came recommendations which led to the establishment of a salary standardization plan for libraries, but, in by far the majority of organizations, deficiencies even more serious than those found in the libraries of the country still exist. That this fact is recognized by the federal government is evidenced in a newly initiated project being carried on at the present time by the United States Employment Service by which a complete and scientific job analysis and specification of all positions within the United States is to be drawn into a job-specification directory. According to present estimates, this will contain a detailed analysis of over 28,000 jobs. The recent depression period in many instances has focused considerable attention upon the possibilities of this new phase of personnel administration.[2]

Objectives of Standardization.—Wage and salary standardization has as its chief objective the development of harmony, understanding, and cooperation among employees through the feeling of a sense of fair play in wage administration and control. This chief aim is usually obtained by means of several specific objectives:[3]

> 1. The formulation of concise and accurate description of work done by each employee.
> 2. The classification of employees into different work groups.
> 3. The establishment of the relative value of each group.

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[1] *Proposed Classification and Compensation Plans for Library Positions*, 1927, pp. 8–9.

[2] See National Industrial Conference Board, *Salary and Wage Policy in the Depression*, 1932, p. 33; and *ibid., Salary and Wage Policy, 1933–1934*, 1935, p. 8.

[3] Adapted from a statement of a company as recorded in Metropolitan Life Insurance Company, *Salary Standardization and Administration*, p. 3.

4. The promotion of merit as the basis for pay and advancement.
5. The determination of average wage and salary standards with limits for work in each position.
6. The apprehension of cases outside fair limits.
7. The formulation of a basis for comparing competitive wages.

Constructing the Salary Groups.—The above statement of standardization objectives calls for a carefully worked out plan of development. There are several steps involved in such a procedure.

1. *Review of Each Position.*—If the position is one involving repetitive operations, a thorough job analysis may be needed. If this is not suitable then a "position description" blank, calling for information concerning the position (title, department, daily and occasional duties) should be composed and placed in the hands of each employee. This blank when properly filled out includes the description of any equipment used and a statement of supervision and outside contact responsibilities.[1]

2. *Determination of the Number of Groups to Be Created.*—This is a very important part of the procedure, since any error in this phase of the work is apt to perpetuate indefinitely unfair wage classifications and scales. The major problem here is to determine the number of grades into which the positions are to be classified. Obviously this depends upon the size and nature of the organization. Some employers have reported as few as four grades; others maintain as many as twenty-eight classes for salaried workers alone. The following five groups are indicative of the salary classifications found in a typical company: office-boy type of work; simple operations performed under close supervision; simple skilled operations requiring clerical ability, machine knowledge, etc.; specialized operations requiring long experience with the company and a knowledge of general practices; and work of a highly confidential nature, such as thorough knowledge of industrial and public relations, or financial, legal, and similar responsibilities.[2]

3. *Determination of the Specific Grade into Which Each Position Is to Be Classified.*—In evaluating the position many factors must be carefully recognized. The complexity of duties involved must be studied. The variety of responsibilities, volume of work, risk of

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[1] For specimen forms, see Metropolitan Life Insurance Company, *op. cit.*, pp. 7–9.

[2] For an excellent illustration of a salary standardization classification chart, see Westinghouse Electric and Manufacturing Company, "Functional Organization," *Supplement to Industrial Relations Manual*, June 22, 1934.

error, seriousness of the consequences resulting from error, supervision required and exercised, confidential nature of the work handled and previous experience and training required must be fairly evaluated. Likewise, the physical effort required, fatigue experienced, objectionable character of the task, the length of learning period, the contacts required to be maintained both within and outside of the organization, and many incidental factors must be analyzed in making proper classifications. These gradings may be accomplished by arbitrary classification, by ranking according to relative value, or by following an established rating scale.[1]

4. *Assignment of Value Points or Specific Units of Evaluation.*—The total individual assignments determine the relative grade of each position. One company using this method assigns 1 to 3 points in the rating of duties; 1 to 8 points to executive responsibility; 1 to 4 points for responsibility in money matters; 1 to 7 points for experience; and so on down through public contact, sex, age, general education, special training, intelligence, and personal qualities, until all qualifications have been taken into consideration.[2] Sometimes, activities and responsibilities rather than positions are evaluated in completing the position grading. In shop work, for instance, a machine-tool operator might be assigned a maximum of 50 points for educational training, 100 points for mental effort, 230 points for skill required, 100 points for physical effort, 220 points for responsibility, 100 points for exposure to accident hazards, and 100 points for general working conditions, making a grand total of 1,000 points. After the maximum weights have been assigned according to relative importance and value, it is then necessary to make gradings for qualifications lower than the maxima.

5. *Establishment of the Actual Maximum and Minimum Limits for Each Group.*—The minimum limits represent the starting point for advancement within each wage group; the maximum limits mean that further compensation for the job within the group is uneconomical, no matter how good the worker is. To pass beyond this limit means an advancement in rank or position, with increased responsibilities. Limits may be established by comparing outside competitive salaries with those falling within each group. Sometimes they are established by plotting actual wage or salary distributions upon a scatter diagram. Still another method involves the construction of a "pay sheet" or "salary key," whereby the upper

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[1] See Industrial Relations Section, Princeton University, *Personnel Programs in Banks*, pp. 20–22.

[2] Metropolitan Life Insurance Company, *op. cit.*, pp. 13–14.

and lower limits are arbitrarily established at a certain percentage (as 10 per cent) above and below the average current wages within the group.

6. *Making of Subsequent Adjustments in the Job Grades or Wage Limits.*—Failure to make necessary adjustments is likely to defeat the entire standardization program. Sometimes a system of periodic review of all job grades is provided, at which time every time-rate worker is given opportunity to know just where he stands, the bases of his ratings, and what he can expect in the future by way of income advancements and promotions. Sometimes, such adjustments are made only as the need arises. Changes are usually recommended to a wage or salary schedule committee, made up of several junior executives, chiefs, departmental supervisors, and the personnel manager. Occasionally, special-position analyses are made at the request of departmental heads. Whatever the cause for these reviews, the employee should always have the opportunity of knowing what is expected of him, and should be given the opportunity of asking questions or seeking advice on matters pertaining to his own salary. Furthermore, careful reviews should be conducted with the introduction of each new position, machine, or method into the organization, and immediate reports on the changes of duties relating to all classified positions should be insisted upon.

7. *Making Individual Wage Adjustments in Conformity with the Scale Constructed.*—Finally, three significant questions arise: How shall the scale be applied to a going organization? How can current adjustments be made without disrupting the entire schedule? What is to be the relationship between new schedules and hiring schedules? In the administration of the system the schedule committee should consider each case individually. In any event, the present scales should be drawn in line with the new schedules as quickly as possible, but quietly, so that the morale will not be injured because of a too sudden and drastic change. An effective plan of administration should provide a periodic review to keep job descriptions and ratings up to date; machinery for the proper handling of positions outside the schedule, new jobs, changes, variations in conditions; and a certain degree of flexibility.[1]

Advantages of Wage Standardization.—The benefits to be derived from this procedure are difficult to appraise accurately, but its worth in terms of dollars, good will, and the general spirit of cooperation existing within the organization is bound to be great. In completing a 17-year intensive study of job and wage payments in civil service, the Civil Service Assembly of the United States and Canada concluded, in part:[1]

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[1] For a further discussion of this problem, see *Personnel Journal*, vol. 15, September, 1936, p. 114, and the Metropolitan Life Insurance Company, *op. cit.*

> A classification (standardization) plan serves as a sound factual basis for and facilitates the selecting of employees; renders feasible the development, adoption, and continued administration of scientific compensation plans for large and complex services; facilitates budget and appropriations processes; displays and organizes the facts necessary for intelligent legislative decisions; and disencumbers all personnel processes from these impediments which arise from the imperfect, misleading, or unsystematic naming of positions.

These advantages are bound to accrue to private industry as well as to civil service, and, if the system is fairly established and properly administered, no serious disadvantages can result from its adoption.

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[1] *Classification and Compensation Plans*, 1928, p. 2 (a report prepared by a section of the Civil Service Assembly and adopted by that body at its convention in September, 1928).

CHAPTER XIX

FINANCIAL INCENTIVES

Positive and Negative Incentives.—An effective incentive is anything which serves to enlist the willing cooperation of the workers in the execution of the functions of a given establishment and which impels them to do well the duties assigned to them. Incentives may be extra-financial, financial, or nonfinancial in character; they may be positive or negative. Extra-financial incentives are those embracing all rewards providing money inducements for the accomplishment of definite quality-quantity standards, except the payment of base-time and overtime wages, and usually take the form of cash premiums and bonuses which are too uncertain and indefinite to be included as a part of the regular wage. Financial incentives generally include any form of salary or wage which is definitely attached to labor service or productivity. Nonfinancial incentives include all other influences, aside from money rewards, which stimulate the worker to do his tasks well. Positive incentives include such things as promotion training, competitive contests, performance records, honorable mention, praise, and good foremanship. Negative incentives take the form of intimidation, antagonism, fear of insecurity, worry, and fear of accident.[1]

Positive incentives imply not only physical exertion, but the elimination of waste; the conservation of machinery, tools, and equipment; the reduction of absenteeism; the cultivation of loyalty; and the assurance of every other condition fundamental to efficient production. All wage systems do not offer the same degree of incentive. Some of them actually discourage production and prevent effective cooperation and thus tend to be negative in character. From the employer's viewpoint, no wage system is satisfactory unless it automatically stimulates workers to utilize to best advantage the industrial opportunities at their disposal and to fulfill the employment obligations imposed upon them by their wage agreement with the organization.

Classification of Financial Incentive Systems.—The newer wage systems are designed primarily to increase output and improve the wage relation, that is, to provide an incentive for good workmanship and loyal cooperation. As suggested in the preceding chapter, these newer methods of remuneration, aside from straight time and salary schemes, include piece-rate schemes, a combination of wage-incentive plans and limited wage-incentive plans. A subclassification of each of these three basic groups is possible, as follows:[1]

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[1] See definitions given in *Cost and Production Handbook*, 1934 ed., p. 611.

1. Piece-rate incentive systems in which the employee takes all the gain or loss—
    - *a.* Piece or straight commission rate.
    - *b.* Taylor differential piece-rate or commission plan.
    - *c.* Merrick multiple piece-rate plan.
2. Wage-incentive plans in which gain above guaranteed daily or hourly rate is shared between employer and employee—
    - *a.* Halsey gain-sharing plan.
    - *b.* Rowan premium plan.
    - *c.* Gantt task and bonus system.
    - *d.* Bedaux point system.
    - *e.* Haynes Manit system.
    - *f.* Diemer combined premium and bonus plan.
    - *g.* Baum differential gain-sharing plan.
    - *h.* Barth premium plan.
    - *i.* Other plans, chiefly Dyer, Stevens, Shanley, Keays-Weaver, K.I.M., and F.A.M.
3. Wage-incentive plans in which an arbitrary location of points between two variables has been assigned—
    - *a.* Emerson efficiency bonus plan.
    - *b.* Wennerlund bonus plan.
    - *c.* Knoeppel efficiency bonus.
    - *d.* Bigelow bonus plan.
    - *e.* Ficker machine rate plan.
    - *f.* Parkhurst differential bonus.
    - *g.* Ernst and Ernst plan.
    - *h.* Sylvester bonus plan.

The chief characteristics of the more important of these individual plans are worthy of detailed consideration.

Incentive Systems in Which Gains and Losses Accrue to the Employee Exclusively.—There are three important plans of wage-incentive payment by which the worker assumes all the responsibility for unit production and wage determination.

1. *Piece-rate or Straight Commission System.*—One of the oldest and simplest incentives is that of the straight piece-rate or commission basis of compensation. Under this plan, the wage payment is made only upon the basis of productivity, on the theory that greater opportunities for earnings will impel workers to produce more and salespeople to sell a larger volume. Thus, if a machine worker is

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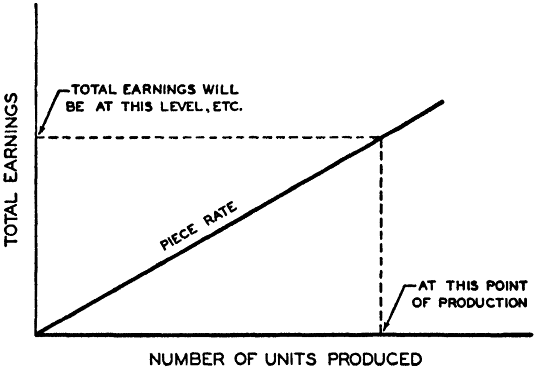
[1] Adapted from *ibid.*, p. 614.

allowed 10 cents per unit for all units of a commodity produced meeting acceptable minimum standards of quality, and if 50 units are produced during the day, then the wage is $5; if 75 units are produced, it is $7.50; if only 30 are produced, the pay is $3. Likewise, if a salesman is employed upon a straight 10 per cent commission basis and if during any 1 week his net sales total $1,000, his compensation is $100; if the following week sales increase to $2,000, his commission is $200; if later they drop to $600, his remuneration is $60, and so on.

The chief characteristics of this plan are graphically pictured in Fig. 25.

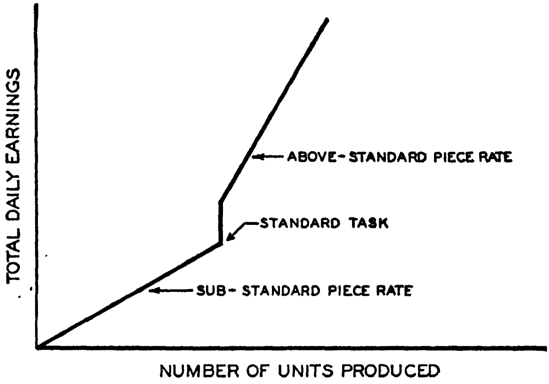


PIECE RATE-COMMISSION PLAN

FIG. 25.

There can be no doubt that the straight piece- or commission-rate system can offer one of the most powerful incentives for increased effort. It has the advantage of being a very simple scheme; earnings can be readily computed when production is determined. However, under poor conditions this scheme is likely to provide a very weak, if not a negative incentive. It requires considerable coaching and supervision, and constant sales or production stimulation when difficulties slow down production. Under it earnings tend to be very uncertain, and often the mental worries of insecurity dishearten the workers. Sometimes it leads to speed-up at the sacrifice of quality. The system places hardship upon the beginner, and often leads to an inadequate supply of workers. Moreover, it encourages commission cutting or rate cutting at the other end of the scale when earnings become abnormally high or excessive. Finally, the choice of the piece rate is almost invariably open to criticism, and every change in processing necessitates a change in rate.

2. *Taylor Differential Piece-rate Plan.*—As the name of this plan implies, two different piece rates are established for each worker: one to apply to production below the standard task; the other to apply when the worker's production is equal to or in excess of the standard task. It is based upon the theory that different piece rates for the performance of a certain task will encourage greatest efficiency in production. If a worker is paid a straight piece rate of 10 cents per piece produced up to a certain point (as 40 units per 8-hour day), and 15 cents per unit on the total number of units when production is equal to or in excess of the standard task (40 units per day), there is a very strong financial incentive to maintain or even surpass the standard of 40 units. A simple diagram will show the theoretical implications of this plan.



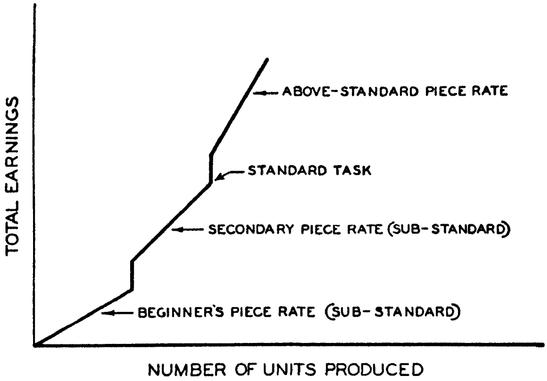
TAYLOR PLAN
FIG. 26.

In proposing this system, Mr. Taylor sought to discover the fundamental and natural laws which he believed governed production. To him, there was a right way and a wrong way to perform each task, and the right way could be determined quantitatively by the measurement of time and motion factors and an intelligent understanding of the elements of human fatigue. It was upon this major assumption of the scientific determination and measurement of production factors that he constructed this incentive plan. Obviously, care must be exercised in determining the standard time for each job, in standardizing the conditions of work, providing ample and systematic instruction, and maintaining intelligent supervision to aid the worker in attaining the standard task. Once the whole scheme of production is scientifically controlled, successful operation depends upon the individual worker. Employees unable to maintain the established quality and quantity standard of work receive a piece rate which is relatively so low that they will almost automatically become discouraged and seek employment elsewhere. The employees who are capable of meeting the qualitative and quantitative requirements of the task are paid a high piece rate—from 30 to 100 per cent above the average rate for the trade or occupation. Exceptional workmen are thus attracted to the plant in which this system of wage payment is applied. No conditions exist which will reduce them to the dulling dead level of mediocrity.

Such a method of wage payment has marked advantages. There is a definite distribution of authority and responsibility. Management is responsible for the accurate determination of the task and the standardization of conditions of performance. For this, it receives complete control of the increased profits. The workers are made responsible for the conscientious and successful application of their time, skill, energy, and intelligence, for which they receive remuneration far above the average for the industry. Such a system of wage payment cultivates good performance by rewarding the exceptional worker in proportion to his efforts. Moreover, it makes for economic justice, because it attempts to establish a necessary relation between income and service by paying a wage that is commensurate with ability and application. As Taylor designed the plan, there is no arbitrary cutting of piece rates when, because of exceptional performance, the workman receives an exceptional income. This removes the objectionable feature of the straight piece-rate system.

Despite these advantages, the original Taylor differential piece-rate plan has had only limited application in American industry. This fact is attributable to deficiencies thought to be inherent in the system. The task is so severe that all but exceptional workmen fail to complete it and become disgruntled. Such a situation will inevitably create a feeling of injustice. The system, moreover, is applicable only within certain prescribed limits. It can hardly be adapted to miscellaneous operations and, within a given plant, is applicable only to routine work. Even in routine processes and operations, the system necessitates so much exacting care in preliminary time and motion studies and standardization of conditions that not many firms are willing to incur either the trouble or the expense involved. Whatever tends to make imperative a redetermination of the task and of rates will augment the expense involved in the application of the plan. The expense would not constitute an objection provided the results were satisfactory. But the task time is usually so severe and exacting that sustained production is problematical, even for high-grade workers. This tends to make the earnings of the worker uncertain and so increases the feeling of economic insecurity. To avoid this difficulty, some firms have modified the original Taylor plan. Instead of setting the low rate far beneath the scale prevailing in the trade or community, they make it equivalent to that scale. This assures a normal minimum wage for average workers. The high rates are still set far above the community rate.

3. *Merrick Multiple Piece-rate Plan.*—Perhaps the most widely used modification of the Taylor plan is that known as the Merrick multiple piece-rate plan. In basic principle, it is the same as that of the Taylor plan, the only difference being that instead of one step up in piece rate, the Merrick plan offers two, making a total of three different piece-rate scales. Usually this additional rate is offered to the worker who is slightly sub-standard with an efficiency rating of 80 to 85 per cent, and thus a slightly higher reward is given to those who have not been quite able to perform the standard task. This plan is well suited for the upgrading of inefficient workers, who otherwise would not continue under the low Taylor piece rate. The plan is flexible and simple, but a large number of compu-

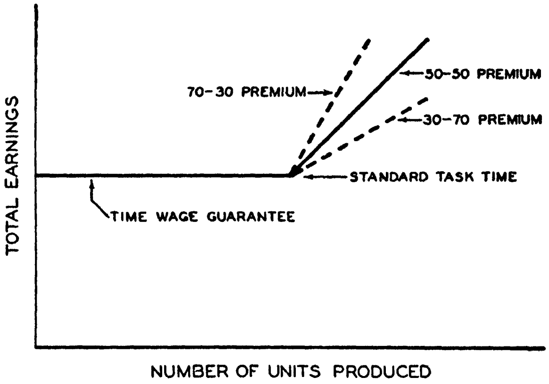


MERRICK PLAN
FIG. 27.

tations must be used in its application. Although it offers considerable incentive toward increasing performance, it is open to the same major objections as are offered against the Taylor system.

Incentive Plans in Which Gains Are Shared Jointly.—The second general type of incentive plans, it will be recalled, comprises those which offer a combination of time and piece rates and in which gains are shared jointly by employers and employees.

1. *Halsey Gain-sharing Plan.*—The Halsey gain-sharing (or premium) plan is one of the oldest of this type. The originator of this plan, F. A. Halsey, believed that a workman is entitled to a reward in the form of a premium or bonus equal to somewhere between one-third and two-thirds of the value of the time saved in the performance of his assigned task. A task time is established for each operation or group of operations and this becomes the basis of computation. The time allotted for the completion of the job is fairly generous, a fact which is reflected in the relatively low premium rate. Once the time limits of a task are fixed, they remain unchanged until the nature of the process or operation is modified, when a readjustment is made. A special rate per hour is established for each operation, so that workmen who fail to attain the standard are assured a regular day wage. The general characteristics of this plan are presented graphically in Fig. 28. A worker is paid this specified rate for each hour that he works. In addition, he receives a premium equivalent to 30 to 70 per cent, depending upon the difficulty of the task and the value of the time he saves on operation,



HALSEY GAIN-SHARING PLAN
FIG. 28.

the bonus rate being computed upon the hourly rate. The employer guarantees that no change in time will be made without fair adjustment and that even though the task is not completed within the time limits established the operator will receive his full hourly rate.

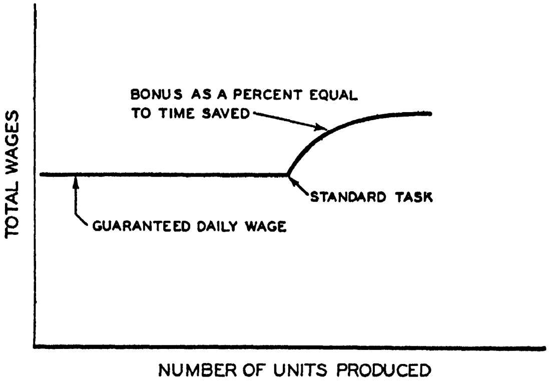
The Halsey system of wage payment has many advantages. It is comparatively easy and economical to introduce and operate. No complicated preliminary time and motion studies, job analysis, or occupational rating is necessary. The determination of the average previous time in which a job was done is obviously a simple matter requiring no expert knowledge. The small amount of clerical work required in collecting average time does not involve great expense. The system can easily be adjusted to routine, unstandardized operations. Revision of rates is easy and not expensive. Readjustments in the hourly rate and the bonus rate can usually be made without incurring the displeasure of the workers, because such changes are normally expected as a consequence of varying business conditions. Since employer and employees participate in the profit accruing from economy of time, a common cause of jealousy and envy is removed. Neither wages nor profits tend to soar to unreasonable levels. Since the task time is rather generously determined, there is an absence of the driving methods to which wage earners are so frequently opposed. In actual experience, the system has greatly stimulated interest and production. The conservation of time and the opportunity to demonstrate superior ability have had a real appeal to the workers. Both wages and profits have been increased as a consequence of greater output and lower production costs.

Numerous objections, however, have been raised against the Halsey premium plan. It is urged that the system is incapable of application to measurable, standardized operations. Because of the absence of standardized conditions and because the worker does not receive the total amount of increased earnings resulting from economy of time, limitation of effort and output is likely to result. Some even contend that the system creates a feeling of injustice in the mind of the worker because he does not receive a reward proportionate to the work he has accomplished. The employer shares in gains wholly attributable to the energy, skill, and intelligence of the worker. On the other hand, the plan may involve injustice to the employer when the workers share in the gains resulting from technical improvements installed by and at the expense of the management. A final objection is that the system encourages the dishonest practice of soldiering, since workers will consciously hustle on certain jobs in order to obtain the premium and conserve themselves by relaxing on other jobs, a practice which is made possible by the guaranty of the regular hourly wage regardless of output. Some of these objections could be removed by paying the worker on the 100 per cent plan, under the terms of which he would receive a premium equivalent to the total value of the time saved in the completion of the job, instead of one-third or one-half, as is ordinarily the practice. Perhaps a more equitable, although obviously a much more difficult, procedure would be to apportion to both management and workers a share in the increased earnings proportionate to the contribution which each makes toward economy of time and increased output. The measurement of relative contribution is admittedly a difficult task.

2. *The Rowan Premium Plan.*—The Rowan premium plan is constructed along lines similar to the Halsey system of wage payment in that it accepts the prevailing conditions and standards of operation, involves a standard time based upon previous experience, assures a regular day wage to those who are unable to achieve the standard, and prescribes definite limits beyond which the earnings of labor cannot go. The plan comprises: (*a*) a task time established for each operation or group of operations; (*b*) the determination of a definite hourly rate of wages for each operation; and (*c*) the payment of the specified hourly wage for each hour of employment, plus a percentage of this rate computed on the basis of the ratio of the time saved to the time allowed for the task. If the time saved is 25 per cent, then the worker responsible for this economy of time receives a 25 per cent increase in earnings; if the economy of time amounts to 50 per cent, he receives 50 per cent increase in wages. Following is a graphic representation of the plan in operation.

Careful observation of Fig. 29 suggests that under this method of payment there is a definite limit to earnings. As the percentage of standard or set time saved increases, the base, that is, the wages of used time to which the percentage of saved time is applied in determining the premium, automatically diminishes. If the workman completes the task in 4 hours, thus effecting a time saving of 50 per cent, he gets a premium of 2 hours, or 50 per cent of the time actually consumed in performing the task. This would give him a job wage of $3, of which $2 is the regular total hour wage and $1 is the premium. Suppose, however, that he completes the job in 2 hours, effecting a time saving of 75 per cent. He then gets a premium of only 1½ hours, or 75 per cent of the time used in performing the task. This would give him a total hourly wage of $1 and a premium of 75 cents or a total job wage of only $1.75. Thus, he gets less by 25 cents for saving 75 per cent of time than he does for saving only 50 per cent. Under such circumstances, the worker will not continue to exert himself excessively beyond a certain point, since his total compensation for the job does not increase beyond that point in proportion to time saved.

The Rowan plan has been applied successfully, but it has not been widely adopted in the United States. Like the Halsey system, it is easy and economical to introduce and administer, requiring no expert analysis of jobs and no scientific determination of time and motion factors, unless the company desires to make such preliminary investigations. It is adaptable, therefore, to miscellaneous operations. The worker finds protection in the absence of excessively speeded up tasks and has considerable control of his working pace. In so far as the system tends to stimulate production, the employer is benefited by increased earnings, since a relatively great incentive is offered to produce somewhat beyond the standard task.



ROWAN PREMIUM PLAN
FIG. 29.

Many of the objections to the Halsey plan are also made against the Rowan system of wage payment. The system is not well adapted to standardized conditions. Beyond a certain point, there is no encouragement to additional exertion on the part of the worker. The plan is likely to develop a feeling of injustice, since the premium received does not bear a progressive relation to the amount of time saved. There is no attempt to apportion to management and workers an equitable share of the product which each contributes through increased skill, intelligence, and improvements. It is also objected that the Rowan system involves so complicated a method of calculating the premium that the average workman is unable to figure how much he has earned on any task, and that this tends to preclude the degree of interest in the job that a simpler method of payment would assure.

3. *The Gantt Task and Bonus System.*—The Gantt method of payment originally represented an attempt to gain immediately some of the many advantages which the introduction of the Taylor plan promised to assure more gradually. On this point, Mr. Gantt has written as follows:

> Not being ready to introduce the differential piece-rate system, which was regarded as the ideal one for obtaining maximum output, I felt that we should not wait for perfection but should offer the workmen additional pay in some manner that would not interfere with the ultimate adoption of the differential piece-rate system. Accordingly, I suggested that we pay a bonus of 50 cents to each workman who did in any day all the work called for on his instruction card.[1]

This plan was adopted along with the provision that there should be paid to the gang boss a bonus each day for each of his men that earned the bonus paid to workmen.

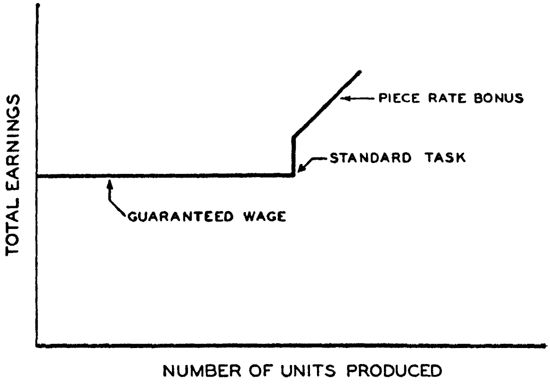
It was soon discovered that the scheme had a fundamental weakness in that after the men had earned their bonus there was no further incentive to additional production. Subsequently, Mr. Gantt devised a satisfactory method for furnishing such an incentive, which took the form of paying the workman for the time allowed plus a percentage of that time.

> For instance, if the time allowed for a task is three hours, the workman who performs it in three hours or less is given four hours' pay. He thus has an incentive to do as much work as possible. If the workman fails to perform the task within the time limit, he gets his day rate. The time allowed plus the bonus is the equivalent of a piece rate; hence we have piecework for the skilled and daywork for the unskilled. One other feature of this work at Bethlehem had a most important effect upon the result—namely, that in addition to the bonus paid the foreman for each man under him who made bonus, a further bonus was paid if all made the bonus. For instance, a foreman having ten men under him would get 10 cents each, or 90 cents total, if nine of his men made bonus; but 15 cents each, or $1.50 total, if all men made a bonus. The additional 60 cents for bringing the inferior workmen up to the standard made him devote his energies to those men who most needed them.[2]

[1] GANTT, H. L., *Work, Wages, and Profits*, 1st ed., p. 101.

[2] *Ibid.*, pp. 108, 109.

From the foregoing description it is clear that under the Gantt system the following principles of procedure are involved: (*a*) a task time is determined for each operation or group of operations; (*b*) an hourly rate is set for each worker; (*c*) the worker who performs a task within the time allotted for it is paid for the time allowed plus a percentage of that time; and (*d*) an incentive bonus is established for foremen. The size of the bonus varies with the companies that apply this method of payment, but ranges between 20 per cent and 50 per cent of the task rate. The actual operation of the system may be seen from a specific case. Assume for example, that the regular day rate is on the basis of 40 cents an hour, and the bonus is set at 25 per cent of the standard time. Then a workman who takes 5 hours to complete a job which should be accomplished in 4 hours will receive $2 for the job, which, on the basis of 8 hours, would mean a daily wage of $3.20, provided the same speed of production is maintained. If he had completed the job in the standard time of 4 hours, he would have received the regular day rate for 4 hours, plus a bonus of 25 per cent of 4 hours, or $2 for the job, which, on the basis of 8 hours would have meant a daily wage of $4, if he maintained his pace. In case he had finished the task in 3 hours, he would still have received the day rate for 4 hours and, in addition, the 25 per cent bonus, or $2 for the job, which, on the basis of 8 hours, would have meant a daily wage of $5.33. As Fig. 30 clearly shows, under this plan, substandard workers are assured a regular day wage, while those capable of making the standard or of exceeding it are really employed on a piece basis.



GANTT TASK AND BONUS SYSTEM
FIG. 30.

The Gantt system of payment yields many benefits. The payment of a regular day rate to those who are unable to reach the standard or who can not consistently maintain it tends to do away with the necessity of such workers finding employment elsewhere and so reduces labor turnover and makes fairly easy the maintenance of the working force. Companies are seldom able to recruit the whole of the working force from exceptional men, but are forced to employ many of average ability or below in order to assure continued operation. The system, moreover, provides a definite incentive to increased production on the part of standard and superstandard workers, who are remunerated for exceptional work. The exemplary conduct of these workers conduces to emulation on the part of those who have not attained the standard, thus raising the production level for the whole plant. Discouragement is prevented by the provision that no workman will be allowed to try for the bonus until he has received sufficient instruction to assure a reasonable basis for the successful achievement of the standard.

Moreover, there is a conscious attempt to bring up to standard the workers who hitherto have not earned the bonus. This is done through the medium of the financial incentive provided for foremen who receive a regular bonus for each of their men who attain the standard and an extra bonus if all their men achieve it. Mr. Gantt states, "This is the first recorded attempt to make it to the financial interest of the foreman to teach the individual worker, and the importance of it cannot be over-estimated, for it changes the foreman from a driver of his men to their friend and helper."[1] If a worker continually fails to attain the standard, provision is made for his transfer to some other kind of work for which he is better fitted. It is a mark of distinction to be known in the shop as a standard or superstandard worker, and sometimes these employees are organized into an honor society.

The success of the Gantt system is in no small measure attributable to the fact that the task time is so determined as to make attainment of the standard regularly possible. The bonus can be earned by average workers even when delays and interruptions of a minor character occur. Under the more exacting piece-rate and differential systems, this is hardly possible. Where the Gantt method has failed, the underlying cause has not been inherent in the scheme but rather in management's failure to provide the conditions essential to success, such as the accurate measurement of time and motion factors; efficient purchasing, planning, and storekeeping; and the determination of proper standards of performance. The system has had considerable application in American industry and, on the whole, has been very well received.

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[1] *Ibid.*, p. 109.

4. *The Bedaux Point System.*—This system of wage incentives represents one of the newer types of plans. The point, or Bedaux (*b*), is a unit of measurement of human effort consisting of an amount of useful work plus time allowances for rest and delay, the total of which can be accomplished by an average employee working at a normal rate of speed for one minute.[1] A point-standard is the number of points allowed for the performance of a given amount of work and is set by time-study analysis. If an operator finishes 200 pieces in an 8-hour day (making allowances for two 8-minute rest periods per day) and the point-standard is 3 points per piece, the point-hour for this operator is computed as follows:

$$\frac{(200 \times 3) + (2 \times 8)}{8} = 77 \text{ minutes of work done per hour}$$

Premiums are based on 75 per cent of the points in excess of 60 per hour. If the above base-rate performance was paid for at 35¢ per hour, the premium would be found thus:

$$\frac{(8 \times 17)}{60} \times 0.75 \times 35 \text{ cents} = 0.595, \text{ or } 60 \text{ cents}$$

Thus the base earnings would be $2.80 and the premium 60 cents. Allowances are considered as delays beyond the control of the laborer and are added to points produced during the day.

Data obtained through the point system may be used for complete analysis of labor costs and operating efficiency. The plan provides an incentive for direct labor, guarantees a day rate, and allows for rest and delays. Under the plan, operators are rated upon a basis of average production, and the posting sheets inform the operator of his efficiency rating and bonus for the previous day's work. Guarantees are made prohibiting cuts in the standard unless a change in production technique occurs. The plan is fairly expensive to install, costly revisions are often necessary, and more rigid inspection is required which results at times in lowered production.

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[1] BARNES, R. N., "The Point System of Wage Payment," *Factory and Industrial Management*, vol. 78, September-October, 1929, pp. 566–568; and "The Point Plan of Industrial Control," *Harvard Business Review*, vol. 6, January, 1928, pp. 219–230.

Other Efficiency-bonus Plans.—Other plans within this classification of wage incentives vary only in minor detail from those described above. The Haynes Manit system establishes, by means of time study, standards which are expressed in terms of man-minutes, hence the "manit" is the standard task of 1 man for 1 minute. Likewise, production is computed upon a time basis of minutes, and when the production per minute exceeds the "manits," bonuses are earned. In order to increase efficiency among supervisors, this plan, as is the case with the Bedaux system, provides for the sharing of bonuses between worker, supervisor, and company usually upon a 5-1-4 basis.

The Baum differential gain-sharing plan embraces the chief characteristics of the Taylor and Halsey systems, as does the Diemer plan. The Dyer system follows other point systems in principle by taking as a unit what the average worker will do in 1 minute and then paying a premium for all units above the standard of 60 per hour. The Barth premium plan follows the Halsey plan, except for the rate of the bonus. Other variations are found in the Stevens, Shanley, Keays-Weaver, K.I.M., and F.A.M. plans.

Incentive Plans with Two Variables.—The third general type of efficiency system is really a combination of the other two. Several representative plans are noteworthy.

1. *Emerson Efficiency Plan.*—The most important plan falling within the third classification is the *Emerson Efficiency Plan.* In common with Taylor's and Gantt's methods of industrial remuneration, this plan presupposes a scientifically planned organization, standardized shop conditions, careful time and motion study, accurate determination of wage rates, and the provision of all conditions auxiliary to successful performance. Efficient planning, purchasing, and storekeeping are prerequisites of success; so also is the provision of expert instruction, demonstration, and supervision. As in the Gantt system, the day wage is guaranteed, regardless of performance, so long as the employee remains in the service of the company. The feature which differentiates this system from the others is the gradual transition from the day rate to the piece rate or efficiency reward, with a graduated scale of improvement in production.

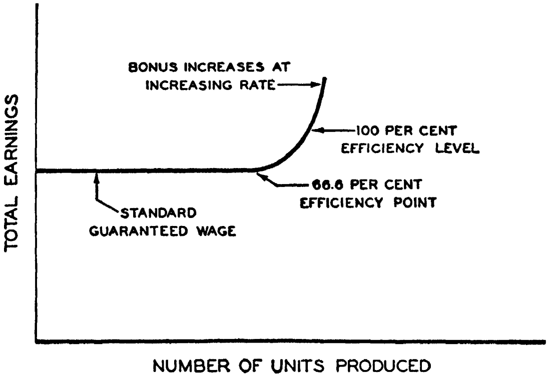
Under the Emerson plan, the following procedure is involved: a task time is set for each operation or group of operations; an hourly rate is provided for each worker; a table of bonuses indicating the incentive reward for varying degrees of efficiency is worked out; and a workman is paid a specified hourly rate for each hour that he works and, in addition, receives a percentage of this rate in accordance with his demonstrated efficiency. The day rate is paid, together with a gradually increasing bonus, after an output of 66.6 per cent of the standard has been attained, as is indicated in Table 10.

TABLE 10.—EMERSON EFFICIENCY PLAN
Simplified Bonus Table

Percentage of efficiency	Percentage of bonus	Percentage of efficiency	Percentage of bonus
67.00–71.09	0.25	89.40–90.49	10.00
71.10–73.09	0.50	90.50–91.49	11.00
73.10–75.69	1.00	91.50–92.49	12.00
75.70–78.29	2.00	92.50–93.49	13.00
78.30–80.39	3.00	93.50–94.49	14.00
80.40–82.29	4.00	94.50–95.49	15.00
82.30–83.89	5.00	95.50–96.49	16.00
83.90–85.39	6.00	96.50–97.49	17.00
85.40–86.79	7.00	97.50–98.49	18.00
86.80–88.09	8.00	98.50–99.49	19.00
88.10–89.39	9.00	99.50 and over	20.00

It will be observed that the bonus, instead of starting when the standard, or 100 per cent efficiency, is attained, begins at 66.6 per cent efficiency, thus providing a reward for the attempt to reach the standard as well as assuring a high bonus for exceptional service. For efficiencies of 66.6 per cent and below, the worker is paid a daily wage only. From 66.6 per cent to 100 per cent efficiency, the workman is paid his hourly rate for the time he actually works plus an increasing bonus according to his degree of efficiency. Above 90 per cent efficiency, the bonus increases 1 per cent for each 1 per cent increase in efficiency until 100 per cent is reached. For efficiencies above 100 per cent, the workman is paid his hourly rate for the time he has worked plus a bonus comprising two parts, as follows: (*a*) the full hourly rate for all the time saved; and (*b*) 20 per cent of the wages for the time worked. Reward is strictly on the basis of efficiency above the minimum day rate, as is illustrated in Fig. 31.

The percentage of efficiency is the ratio between standard time and actual time, that is, between the time limit set for the job and the amount actually consumed by the worker in completing it. Consequently, a worker's efficiency is determined by dividing the sum of standard time by the total actual time taken. Thus, if, during a period of 2 weeks, a worker has an actual working time of 90 hours on jobs for which the total standard time is 80 hours, his efficiency is 89 per cent. If in the same time he had completed jobs involving total standard time of 100 hours, his working efficiency would have been 111 per cent. A worker is 100 per cent efficient when he completes the work in the standard time set for it. Those who are unable to achieve an 80 per cent efficiency are assumed to be misplaced and at the earliest opportunity an effort is made to assign them to work suited to their capacities. Table 11 indicates how earnings are adjusted to efficiency under the Emerson system.



EMERSON EFFICIENCY PLAN
FIG. 31.

TABLE 11.—EARNINGS UNDER THE EMERSON EFFICIENCY SYSTEM

Worker	Standard time	Actual time taken	Efficiency, %	Base wage	Bonus	Total job wage	Actual earnings per hour	Total wages, two weeks[1]
A	80	120	66.6	$48	....	$48.00	$0.40	$48.00
B	80	100	80.0	40	$1.60	41.60	0.415	49.80
C	80	90	88.8	36	3.24	39.24	0.435	52.20
D	80	80	100.0	32	6.40	38.40	0.48	57.60
E	80	70	114.2	28	9.60	37.60	0.535	64.20

[1] Assumes a 10-hour day and sustained production.

The Emerson efficiency system of wage payment has much that commends it to both employers and employees. The provision for a regular day wage offers a desirable measure of economic security, the worker being certain of an income whether he qualifies for the bonus or not. There is no encouragement to indifference, however, since those who do not attain an efficiency of 80 per cent are transferred to other work. The payment of bonuses graduated according to efficiency is a stimulus to each worker to increase his output and thus obtain additional income. The generous treatment of workers who achieve 100 per cent efficiency and over is a distinct incentive to exceptional employees. The system does not aim to eliminate all but the exceptional workers but rather to raise the standard of performance for the average, a distinct advantage over the Taylor and Gantt systems. The wide spread of incentive bonuses and the provision of careful instruction and supervision do much to improve the quality and quantity of work throughout the shop.

The Emerson method, moreover, is not severely exacting. Instead of being calculated for each job, the percentage of efficiency is determined for a period of time—2 weeks or a month—so that if a worker falls behind in one task he can make up the advantage on another. Day wages are usually paid weekly, but bonuses are generally distributed at the end of 2 weeks or a month, which materially reduces the payroll expense. Because there is no abrupt break between day rate and efficiency rate, workers seldom suffer loss because they missed the bonus output by a small margin. The graduated bonus scheme makes it unnecessary to introduce the detailed job and time analysis which is required by the Taylor, Gantt, and several other plans, thus saving some expense. Foremen are subject to less anxiety and strain under the Emerson plan, because, if their men do not attain the set standard on one job, they can redeem time on the next. Employers, nevertheless, are able to allocate to each job the labor cost incurred in its completion. Furthermore, it offers increased incentive to counterbalance mounting fatigue as production is carried higher and higher.

Some have objected to the Emerson system on the ground that, since it is less exacting than certain other efficiency plans, there is a conspicuous absence of "drive" and responsibility, or at least that these exist in a relatively minor degree. This is probably true, but the system assures sufficient drive and responsibility to warrant successful performance, at the same time avoiding the abuses which are usually associated with the other plans. Because a considerable measure of control is left in the hands of the workers, it is obviously less easy under the Emerson plan to predetermine output and costs. This makes it difficult to fix selling prices over extended periods. There is reason to believe, also, that the economies in payroll expense resulting from the fact that bonuses are not paid weekly are debited with the considerable expense involved in calculation of the elaborate and fractional bonus rates.

2. *Miscellaneous Plans.*—Numerous other plans, all more or less representing variations or modifications of the plans already described, have been proposed to meet peculiar needs. The Parkhurst differential bonus plan sets up 15 or more bonus classes, each equivalent to 25 cents per day for 100 per cent efficiency, and allows for a bonus payment beginning at 60 or 70 per cent efficiency to be paid above a minimum base rate. The Bigelow bonus plan resembles the Parkhurst, except that the first stage of the bonus is made at 73 per cent. Among other similar schemes are the Wennerlund (similar to Emerson but with bonus starting at 74 per cent), Knoeppel (bonus begins at 67 per cent efficiency), Sylvester, and Ernst and Ernst.

Incentives for Executives.—Financial incentives for wage earners have received considerable attention throughout this and other countries, but little thought has been given to the standardization of base rates or the provision of fair and adequate incentive systems for executives. Of particular interest in this connection are the results of a recent investigation into the practices of compensating buyers in a large retail establishment.[1] This study disclosed the complete lack of any logical relationship between total salaries paid buyers within departments and between departments. In one particular case, it was discovered that extra payments made to men in similar executive positions within the same company actually ranged between 2.4 per cent and 516.6 per cent of their base salaries. Again, in one case, it was discovered that the buyer of a department showing a net profit of 6 per cent had received extra bonuses amounting to 73 per cent of his base salary, while the buyer of another department showing a profit of 90 per cent received extra compensation of only 5.5 per cent of his base salary which was substantially equal to that of the first buyer. In another case involving two buyers, both of whom reported total volumes for their departments of about $500,000, one was found to be receiving a base salary of $8,000 while making a net profit of 18.8 per cent; the other received $14,000 in base salary, with a net profit of 11.50 per cent. But the greatest injustice of this case occurred when the first buyer received no extra compensation while the second received extra bonuses amounting to 18.5 per cent of the base salary.[1] In order to correct the conditions described above, an incentive for executives including the following specifications was devised:[2]

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[1] Hopf, H. A., "Executive Compensation: A Problem in Incentives," *Journal of the Society for the Advancement of Management*, vol. 2, no. 1, January, 1937, pp. 15–22.

1. One policy applicable to both base salary and extra compensation.
2. A uniform basis of computing compensation, on either store-wide or departmental lines.
3. An objective basis, rooted in accomplishment rather than pull.
4. Basis as certain as the accounting figures in the company's books.
5. Simple in application, easily understood.
6. A program which would appeal to employers and employees as fair, impartial, and reasonable.

After a careful analysis of data over a 10-year period, a store-wide plan of executive compensation was put into operation. Under this plan the actual amount of bonuses for each buyer was determined by multiplying the net profit of the department by the excess of profit percentage over the 5 per cent profit base. Where unusual circumstances prohibited certain departments from showing a 5 per cent profit, proper adjustments were made in the base salaries of executives, but a rigid rule of no extra compensation in such departments also was adopted.

Another illustration of the inadequacies of executive incentives is recorded in reference to a manufacturing company.[3] For a number of years, this company had followed the practice of distributing among the executives of the company cash bonuses in proportion to salaries. In addition, from time to time, shares of common stock were distributed with the understanding that upon leaving the company the management would have the right to repurchase the stock.

One of the responsible executives within the group was finally convinced that a change in this old custom should be made and that a new plan should be instituted which would do four things: "1, take full advantage of the remunerations made; 2, reward materially the accomplishments of unusual value; 3, provide incentives to individuals to which they might be expected to respond; and 4, adjust compensation in line with the results produced."[3]

After considerable study a few simple but effective changes were instituted. Base salaries of the executive group were adjusted upon the basis of skill, judgment, and responsibility. A "cash bonus fund" was established, the size of which was determined by an increasing scale of percentages of the base salary fund supplemented by an "incentive bonus fund." Out of these funds, bonuses were distributed to those who, in the opinion of the board, had rendered signal service to the company.

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[1] *Ibid.*, p. 18.

[2] *Ibid.*, p. 19.

[3] *Ibid.*, p. 20.

Even though the above instances may represent extreme cases, they nevertheless serve to suggest that far too often the management does not know of injustices and inconsistencies until a thorough review of existing practices has been made. Once the undesirable practices are known, it is not difficult to take appropriate steps toward remedying the situation.

The Workers' Reaction to Efficiency Wage Plans.—Wherever they have been properly applied and fairly administered, incentive wage systems have met with generous response from employees. The quality of the product has improved, quantity production has increased, labor turnover has been reduced, and many of the causes of friction in employment relations have been eliminated. When conscientiously applied, such plans have a potential capacity to produce a far greater measure of economic justice than the old methods of industrial remuneration. Experience indicates, moreover, that these beneficial results are in direct proportion to the generosity of the bonus; the larger the incentive wage, the greater the response.

Many workers, however, especially members of certain trade unions, have frequently developed a relentless antagonism toward efficiency wage schemes. It is argued that the basic purpose of such plans is to increase production and profits rather than to assure greater equity in the distribution of the product of industry. The plans are regarded as subtle means of speeding up workers to levels which are deleterious to their health and well-being, and of encouraging the dishonest practice of cutting the piece rate just as soon as the workers' earnings rise above the general average for the community. It is denied that the material factors in production can be accurately and scientifically measured in quantitative terms. The contention is made that even if this were possible there is always the human variable contained in the judgment of foremen and time-study men who make the determinations, set the task, and fix the rate. The uncertainty of the worker's response is frequently cited as an objection to such schemes. The determination of the task time and rate by the employer alone is denounced as savoring of industrial autocracy, which is one of the major evils unionism seeks to abolish. Moreover, the whole scheme of scientific management is viewed as a diabolical plan to destroy or forestall a democratic system of collective bargaining with independent trade unions.

Unfortunately, many of these criticisms are well founded. The selfish manipulation of efficiency wage systems by unscrupulous employers and pseudoscientific efficiency experts, whose chief purpose has been to speed up the workers only to cut the piece rate, is doubtless responsible for this opposition. It should be urged, however, that these abuses are not inherent in the new methods of wage payment any more than bomb throwing, racketeering, and other forms of violence are inherent in trade unionism. Perhaps after all, these are not the real grounds for trade-union opposition. The late Prof. Hoxie, who made a special investigation of the whole subject of scientific management and trade-union reaction to it, states:

> Scientific management can function successfully only on the basis of constant and indefinite change of industrial conditions—the constant adoption of new and better processes and methods of production and the unrestrained ability to adapt the mechanical, organic, and human factors at its disposal to meet the demands of those new production processes and methods. On the other hand, trade unionism of the dominant type can function successfully only through the maintenance of a fixed industrial situation and conditions, extending over a definite period of time or through the definite predetermined regulation and adjustment of industrial change. Scientific management is essentially dynamic in its conception and methods. Trade unionism of the dominant type is effective only when it can secure the strict maintenance of the industrial status quo.[1]

It is quite possible, however, to introduce efficiency wage systems into industries that are effectively organized and in which there is complete recognition of the union, and this is frequently done. A well-organized system of collective bargaining providing for joint administration of wages, which brings base rates and piece rates within the control of both employer and workers, removes much of the ground for objection. It is to the absence of machinery for safeguarding the piece rate that the workers have objected. The arbitrary determination of task time and piece rates by the representatives of the employer without consultation of the workers is unacceptable to independently unionized employees. When the whole wage system is democratically controlled, common arguments against efficiency wage plans lose force.

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[1] Hoxie, R. F., "Why Organized Labor Opposes Scientific Management," *Quarterly Journal of Economics*, vol. 31, November, 1916, p. 78.

Whatever objections may be made against the new methods of remuneration, it is difficult to see how any equitable system of wage payment can be devised without careful analysis of the various operations and processes in a given plant or office and the quantitative determination of the task time and the wage rate. Certainly, such procedure is fundamental to incentive wage methods. Justice in the matter of wages presupposes recognition of the interests of both employers and employees. When properly safeguarded, efficiency wage plans help to produce desirable labor relations.

Basic Principles for the Improvement of Efficiency Systems.—If the newer methods of industrial remuneration are to be applied successfully by any individual employer, certain principles of procedure must be complied with. It is necessary, first, to construct the incentive plan so that the worker's regular day wage plus his incentive earnings shall be considerably higher than the standard of wages for similar work in the community. Unless this principle is adhered to, the worker will soon discover that his added efforts are unrewarded, and the incentive plan will fail, as it should. The incentive must always be sufficient to interest and stimulate the worker. The task time must be determined so accurately and the rate set so fairly that injustices will not result. Haphazard determination of standard time and rates, which has characterized many so-called "efficiency schemes," leads to dissatisfaction. Either the task is so easy that workers are able to run their earnings to levels which are unreasonable in view of the service performed, thus necessitating an arbitrary cut in piece rates; or the task set is so severe as to make attainment almost impossible, thus causing discouragement and opposition on the part of the worker. Both of these effects are disastrous and can be avoided by careful time and rate setting.

Once the task and the rate are accurately and fairly determined, there should be no revision unless changes in mechanical equipment, specifications, and processing make this imperative. In any readjustment of either base rates or piece rates, the workers should be consulted and the facts presented to them. Otherwise, revision downward will create discontent and mean ruin for the scheme. Workers should not be unjustly penalized for interruptions and delays which are beyond their control. Imperfect materials, inadequate supplies, poor equipment, bad planning, and intermittent break-downs inherent in the industry are obviously not attributable to the worker, and he should not suffer loss of earnings on account of such conditions. The payment of a minimum day wage helps materially in eliminating friction resulting from such circumstances. The plan of incentives should not be so complicated that the average workman is unable at the end of the day or the week to calculate easily his total earnings. If he cannot do this, much of the stimulus to increased effort and improved workmanship is lacking. Moreover, if the calculation of earnings is extremely difficult he tends to become suspicious of management's accounting, a condition which will lower his efficiency.

Standard rates may be arrived at on the basis of past performance, the general observation of average times, the estimates of experienced workmen, or detailed studies of time and motion factors in the operations involved. The use of time and motion studies is by far the most satisfactory method, provided it is placed in the hands of experts and the time-study department, aided by superintendents, foremen, and employees. Two kinds of rates are involved, namely, the base rate and the piece rate. The base rate is the amount per hour which the company is willing to pay an employee in return for the satisfactory performance of his duty. The most successful incentive systems have provision for a basic wage per hour. The performance expected in return for the base wage is determined when the time studies are made, and is most satisfactory when agreed upon by a joint conference of foremen, workers, and representatives of the time-study department. Base rates have a marked influence upon piece rates, production, and total earnings, so careful determination is necessary. The cost of living, the prevailing rate for similar work in the community, and the judgment of workers and foremen are some of the considerations which influence the basic wage.

Base rates are usually accepted as the minimum wage, to which an additional amount, called "piece rates," is added in the form of bonuses, premiums, or some other incentive wage, for all employees whose performance is above the minimum. A fundamental assumption of all incentive systems of wage payment is that no acceptable conception of what constitutes a fair wage is possible without a correspondingly clear conception of the nature and amount of work required in exchange for such a wage. Wages are remuneration for work. The pertinent inquiry, therefore, is: What are the elements of the task? Such elements include quantity and quality of product, the amount of energy necessarily expended in performance of the task, the degree of fatigue, and the conditions of employment. Before time studies can be used to determine accurately basic rates and incentive wages, working conditions must be standardized; that is, all conditions that preclude efficient performance must be eliminated. This will call for analysis of such factors as ventilation, heating, lighting, rest periods, seats, and hazards. Once conditions of work are thus standardized, attention is given to the analysis of the task. It should not impose undue physical and mental strain. These provisions, combined with proper allowance for rest periods, should safeguard the interests of the employee. Extraordinary conditions do not enter into the calculations and must in no way be permitted to deprive the operative of his just earnings. Management must assume all responsibility for interruptions which are beyond control of the employee.

The object of time and motion analysis and standardization of conditions is not to speed up the worker, but rather *to discover the conditions of the easiest and most effective production by eliminating the avoidable waste which makes for inefficiency.* It is difficult to escape the conclusion that such quantitative determinations are fundamental to the setting of wage rates which are reasonable and equitable for both the employer and the worker.

CHAPTER XX

EMPLOYEE STOCK OWNERSHIP

General Character of the Movement.—The recent depression period has given rise to serious questions with regard to the sharing of business proprietorship with employees through extensive employee stock-ownership schemes. Prior to the stock market crash of 1929, employee stock-ownership plans had met with almost unprecedented success, even to the extent of inspiring hope in the minds of some that this development would lead ultimately to the democratic ownership of industry throughout the nation. But with the precipitous decline in the market prices of stocks came a period of waning interest. In many instances, there developed direct opposition toward all such schemes, and this greatly retarded the growth of the movement. With the upward swing of the business cycle, which began in 1935, the employees of many companies again manifested a serious interest in this form of ownership.

Employee stock-ownership plans begin where profit sharing ends. As was pointed out in Chap. XVIII, profit sharing accords to the workers a share in the profits of the enterprise without requiring any investment of their own funds. Stock ownership, on the other hand, goes further and seeks to encourage the wage earner to share in the ownership of capitalistic ventures, assume the risks of business investment, and participate in whatever gains may accrue therefrom. Profit sharing does not necessarily seek to change the status of the laborer; employee stock ownership does.

Many corporations in the United States have adopted plans for distribution of stock among their employees, and in some notable cases a major portion of the shares has been placed in the hands of the working force. Another phase of this important movement for the wider distribution of securities is "customer ownership." The sale of 6 and 7 per cent guaranteed cumulative preferred stock to customers has been sponsored by public utility companies, with the result that hundreds of millions of dollars have been invested in these enterprises by consumers. The growth of both of these phases of popular ownership of securities was doubtless attributable to the general prosperity in the decade following the World War;

the purposive stimulation of thrift and saving during that great crisis; and the sound, conservative management of business and industrial enterprises which at that time generally increased confidence in industrial securities as a form of investment.

The Rise and Decline of the Movement.—The idea of selling stock to employees is not entirely new. For many years, attempts have been made to give employees access to ownership through stock distribution under profit-sharing plans and to dispose of blocks of securities to the workers on favorable terms. For several decades, important corporations, such as the Illinois Central Railway, have given their employees an opportunity to purchase stock. It is within the present generation, however, that the movement has acquired its greatest momentum, especially in the period from 1920 to 1930. In May, 1926, more than 200 companies were giving their employees an opportunity to acquire stock on some sort of deferred payment plan.[1] At the end of that year the employees of 24 leading companies owned or were buying a total amount of stock of their respective companies equal to 5 per cent of the market value of the total shares outstanding.[2] The market value of the average holding or subscription of employees in these 24 companies was $1,313 each.[3] An analysis of 350 employee stock-purchase plans in the United States gives the following information as to their periods of inauguration:[4]

Years of Inauguration	Number of Companies
1900 or earlier	3
1901–1905	14
1906–1910	13
1911–1915	30
1916–1920	111
1921–1925	162
1926–1927	17
Total	350

Although it is difficult to estimate the actual number of companies sponsoring stock-purchase plans in 1928 and 1929, it is undoubtedly true that profits and general prosperity existing at that time encouraged even a further development. Up to the beginning of the great depression, at least two tendencies were evident:

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[1] FOERSTER, R. F., and ELSE H. DIETEL, *Employee Stock Ownership in the United States*, p. 8.

[2] Industrial Relations Section, Princeton University, *Employee Stock Ownership in the United States*, 1927, p. 175.

[3] *Ibid.*

[4] Adapted from National Industrial Conference Board, *Employee Stock Purchase Plans in the United States*, 1928, p. 2.

1. Prior to 1930 there was an expanding program of employee stock ownership, and many companies that had originally developed such programs were enlarging them to include greater numbers of workers and shares.
2. Up to that time, employees participating in stock-purchase plans were usually members of selected groups, such as junior executives, office workers, and salesmen. This practice was thought by many to violate one of the primary aims of stock-ownership plans; others felt this policy was not only sound, but desirable as well.[1]

The phenomenal development prior to 1930 received a severe setback during the years which followed the stock market crisis of 1929. The serious influence of the depression upon employee stock ownership plans is clearly illustrated in the results of a recent survey covering 64 companies employing 309,317 workers, which showed that in 1929 approximately 23 per cent of the companies maintained stock-purchase plans for the workers, but that by the end of 1936 only 1 per cent of the companies surveyed maintained such plans and that only 12 per cent of the employees were affected.[2] It is, however, important to observe that many of the leading business organizations in the nation have maintained their stock-purchase plans in modified form throughout the depression period or, more recently, have inaugurated considerably revised savings plans for the mutual benefit of employer and employee. Out of some 10,000,000 individual stockholders in the United States it has been estimated that in 1933, over 1,000,000, or 10 per cent, were factory employees participating in some type of stock ownership scheme.[3]

Reasons for Initiating Stock-ownership Plans.—A congeries of motives has led to the introduction of employee stock ownership schemes. Each employer has his own reason for incorporating such plans. Many are convinced that only in this way can wage earners ever obtain a share in the ownership of industry and participate in the profits which they have helped to produce. Closely associated with this motive is the hope that the worker's acquisitive desire will thus be satisfied, and that this will increase his interest in his employment relationship. Where employers have sensed the economic insecurity which characterizes the life of the average wage earner, they have seen the necessity of promoting thrift and accumulation for the inevitable days of illness, old age, and other exigencies which are prolific sources of distress. The motivation in many cases issues from the belief that employee stock ownership will create interest in the job and the company, reduce the turnover of labor appreciably, and improve generally the relations between management and employees. Some of the most prominent plans now in operation have had their inception in the desire to reward faithful and efficient employees and to provide a relatively safe place for the investment of their surplus funds. In a few cases the plans have been introduced as a means of providing for employee representation on boards of directors or of gaining a wider distribution of stock ownership.

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[1] *Ibid.*

[2] *Factory Management and Maintenance*, vol. 94, December, 1936, p. 39. Another study found that "by 1936 only one-fourth of the plans established prior to 1929 were still in existence" among the several hundred companies surveyed, and many of these were not being vigorously applied. (*Ibid.*, p. 25.)

[3] *Ibid.*, vol. 94, August, 1936, pp. 32–33.

Possible Variations in the Plans.—In constructing a plan for the distribution of shares of stock among its employees, a company may adopt one of several general principles, or some modification of them. First, it may decide that the purchase price of the stock shall be paid completely by the employee. This principle has been widely applied. The stock is sold to the employee at its current market value, at par, or at a discount. The second possibility incorporates a plan of joint payment under the terms of which both the company and the employee assume responsibility for payments. Some of the largest corporations in the United States have applied this principle with remarkable success. Finally, the company may present its employees with shares of stock, in which case it may retain possession of the securities, the employees receiving only the dividends. The stock may carry no voting privileges, although in certain cases employees have been given the opportunity of selecting one or more members of the board of directors. Eligibility to participate under such a plan is usually based upon good standing, length of service, type of position held, or some similiar condition.

Either as a variant of the foregoing types or as an addition to them, a fourth plan involving profit-sharing features is sometimes inaugurated, the profits being distributed partially or wholly in the form of stock. Net earnings are divided equally between the employees and the regular stockholders, the shares of the former depending upon general employment record, length of service, and degree of responsibility attached to the position held.

The practice is sometimes adopted of distributing stock as a reward for meritorious service to the company, quite apart from any formal profit-sharing features. Length of service, unusually efficient work in building up the business in its early stages, inventions of machinery, improvement of old methods and processes, and general loyalty to the company are among the bases for distribution.

General Features of Typical Plans.—As a means of creating a bond of mutual interest between management and employees, stock ownership plans are admittedly still in the experimental stage, a fact which probably accounts for the absence of uniformity in basic principles and methods of procedure. Despite this, the plans of both small and large companies contain general features in common. At stated intervals, the company offers shares of stock either to the whole of its employees or to certain classes. Eligibility to participation is normally based on continuous service for a specific period, usually 1 year; but sometimes, as in the case of the American Cast Iron Pipe Company, the amount of stock each employee is allowed to buy is commensurate with his service record.[1] Although officers and directors are often excluded and only executives are eligible under some plans, the tendency now is to include all employees. Not a few plans deny participation privileges to employees receiving more than a stated wage or salary. In some plans, a minimum of a certain number of shares is established. In others a maximum subscription of from 20 to 25 per cent of annual earnings is established; still other plans limit the number of shares which may be taken in relation to earnings by prorating each share to so many hundreds of dollars in wages. Subscription payments usually amount to a fixed minimum percentage of the employee's earnings and are payable in weekly or monthly installments. In cases where no specific limitation on subscription is made, as well as in other cases, employees are discouraged from subscribing for more than they can pay for with comparative ease and regularity. If the offering is oversubscribed, smaller subscriptions are usually allotted in full and larger ones are scaled down. Sometimes the percentage for which an employee may subscribe is based upon his length of service with the company.

Stock is usually sold to employees at the market price, but sometimes it is disposed of at par or at book value. The employee investor often enjoys distinct advantages over outside investors in that payment for his stock is aided materially either by the company's contribution to the principal, or by a bonus, the payment of which is contingent upon continued service with the company and the retention of the stock for a period of years. Often the company contributes an amount ranging from 33 to 50 per cent of the

[1] *Steel*, vol. 98, Apr. 20, 1936, p. 16.

employee's payments, the sum being credited to his account. Bonuses paid for continued service and retention of stock range from 50 cents to $5 a share annually, the payments continuing usually for 5 years. Considerable sums in unpaid bonuses often accumulate because of forfeitures by those who leave the firm or fail to hold their stock. These funds, which draw interest at 5 or 6 per cent, are distributed at the end of the bonus period among those employees who have complied with the conditions of the plan.

Although many companies allow an employee to pay cash in full for his stock if he wishes, the general practice is to provide for purchase on the installment basis through deductions from wages. In order to decrease clerical costs, it is desirable to make deductions monthly, even though pay day comes more frequently. Installments are a fixed amount in even dollars or a percentage of the wages, the total subscription to be paid in a certain length of time, ranging from 1 to 5 years. Most plans specify maximum deductions of from 10 to 25 per cent of the wage. If the purpose of the plan is primarily to encourage thrift, the percentage is considerably lower.

Dividends declared on stock subscribed for by the employees are usually credited to their account. Credits accruing from this source are offset, in part, at least, by the interest charged on deferred payments. The company guarantees that the sum of the installments plus accrued dividends will be sufficient to complete payment for the stock within the specified period. It is customary for the company to retain possession of the stock during the period of payment and to surrender the same upon completion of the installments.

Circumstances may arise which make it difficult or impossible for the employee to meet his payments. At its own discretion, the company may suspend payments in case of necessity, such as illness, disability due to accident, temporary unemployment, leave of absence or an unduly severe period of depression. Because the average wage earner's payments represent the only savings he possesses, it is imperative that any acceptable plan of stock ownership shall provide for concellation by the worker in case of need. Most plans contain such a provision; the employee, upon request, is granted this privilege in case of illness, permanent disability, or leave of absence. There is usually a time limit on suspension but this may be extended if necessary. Upon return to regular employment the employee is usually given the opportunity of making up his back installments or the company may extend the time limit for completion of payments. Full cancellation is permitted by some companies. An employee may receive only a refund of his own payments, but it is customary to give him his principal with interest from 3 to 6 per cent. At such times, the worker forfeits his share of accumulated unpaid bonuses, but interest charged against deferred payments is cancelled.

The privilege of cancellation is also retained by the company. The employer may terminate the arrangement if an employee defaults on his payments for a specified period of time, fails to make a certain number of payments, voluntarily or involuntarily leaves the service of the company for causes other than death, disability, or retirement on a pension, or fails to report for work when requested to do so following a layoff. Sometimes, other conditions may occasion cancellation by the employer, such as the failure of an employee to retain two-thirds of the stock which he purchased under previous plans or an attempt to sell or transfer rights under the terms of subscription. Sometimes participation automatically ends at death or retirement on a pension. In cases of cancellation by the company, the adjustments made are similar to those which obtain under cancellation by the employee.

If an employee dies before his subscription is fully paid, it is the general practice to refund to his beneficiary at least the paid-in installments with interest, or to permit the beneficiary to complete the payments. A number of companies reserve the right to deliver to the beneficiary stock equivalent to the paid-in amounts, with interest. Pensioned employees are usually permitted to continue their payments on a subscription but are not granted the privilege of further subscription. Many companies terminate the arrangement when an employee is pensioned, in which case the adjustments made are more liberal than in cases of resignation or dismissal. He is given all stock held for him, both the shares he had paid for and those which are credited to his account through the company's contributions. In a few cases, the less liberal practice obtains of refunding to him only his own payments with interest.

A special effort should be made to reduce the employee's risks to a minimum and to safeguard his interests in every particular. The favorable price at which the stock is offered to him, the payment of special bonuses and extra dividends, the company's contributions to the total payment, and the refund privileges in cases of emergency or termination of service are evidences of favored treatment. In order to encourage retention of stock, loans are sometimes made on shares which have not been completely paid for, but such stock cannot be pledged as collateral for a loan negotiated by the employee with an outside agency. In fact, the assignment, pledge, sale, or transfer of stock not fully paid for is explicitly forbidden.

Stock certificates are usually delivered to the employee as soon as possible after completion of payments. In some cases, the employee must agree not to sell his shares for a certain length of time, even though they are fully paid for and the certificates have been delivered. The purpose of this is to prevent employees from seizing the first opportunity to make a profit and to preclude absentee control of the enterprise.

Usually only one kind of security is offered—either preferred stock or common stock, more frequently the latter. Sometimes both are issued in a specified ratio. In some instances, an "employees' special stock" is issued which is preferred as to assets before common stock, is generally nonvoting, has a par value of $10, and is paid a dividend of from 6 to 8 per cent. In case of necessity, the company sometimes promises to repurchase such stock at a price approximately the original figure. Regular stock issued to employees carries voting power, which may be exercised as soon as payments are completed. In the meantime, the stock is voted by the trustees.

It is essential that employees be given absolute freedom of choice in the matter of purchasing stock, and employers exercise considerable care to safeguard such freedom. The literature announcing stock ownership plans frequently contains a statement similar to the following: "No employee is under any obligation to purchase stock. The present standing and future prospects of an employee will not be affected in the least degree by his decision as to the purchase of stock." On the other hand, it is made clear that the purchase of stock by employees does not impair in any way the company's right of discharge. Often a special attempt is made to present both the advantages and risks of stock ownership and the possible fluctuations in the market price.

Stock offered for sale to employees is usually purchased in the open market. It may, however, be donated by or purchased from a large stockholder, or it may be treasury stock or certain blocks of stock previously unissued. About a month before the subscription date, a circular letter is sent to employees, specifying the dates between which subscriptions will be received, the total number of shares available, the number of shares each employee may purchase, and the terms of purchase. A subscription blank usually accompanies this letter and often takes the form of a contract, the signing of which binds the employee to the terms of the purchase.

In inaugurating employee stock-ownership plans, it is customary for the company to reserve the right to amend, change, or terminate the plan at any time. It also reserves the right to withhold examination of its books and to provide such machinery of administration as it deems necessary and wise. Employees may or may not be given special representation on the company's board of directors. Administration of the plan is ordinarily entrusted to a board of directors, a special committee, or special trustees chosen by the company. In some cases, an individual officer of the company has been given administrative responsibility in the matter; in others the duty is assigned to the employees' benefit association. All expenses of administration are borne by the company.

Some Encouraging Results.—It is probably still too early either to measure the results of employee stock-ownership plans or to predict their future growth, although the period preceding 1938 has yielded valuable experience as to the relative strength of different plans. The conclusions of employers, based on experiences, do not agree upon the practicability of various schemes. Yet many employers are convinced that their experiments with respective plans warrant unqualified endorsement. They contend that the movement has encouraged thrift, enhanced the worker's knowledge of the problems of business and finance, reduced labor turnover, and created a deeper interest in the job and company. Others claim that distribution of stock among their employees has tended to increase output, improve the general quality of workmanship, and give the workers a real share in profits. It is pointed out further that in making the worker more appreciative of the problems of business administration and in satisfying his desire for ownership, a spirit of conservatism is cultivated which issues in more harmonious employment relations.

In spite of the estimate that more companies dropped employee stock-purchase plans during the depression than retained them,[1] recent records of plans offered employees by leading companies throughout the nation indicate that there is real merit in the schemes and that, if properly administered, they can become an important factor in improving labor relations. In the spring of 1936, Sears, Roebuck and Co. announced an extension of its stock-ownership plan. This plan is voluntary, yet is taken advantage of by 95 per cent of those eligible to join after being with the company 3 years. Five per cent of the worker's salary goes into the plan each year, and this amount is matched by the company's contribution of 5 per cent of profits. The money is then invested in the company's common stock at market price and credited to the employees' account. Dividends are used to buy more stock. During 1936, the company gave $1,699,647, which was credited to the employees' account in units of service. Each worker with 10 years of service received $1.77 from the company for each dollar subscribed for company stock; those with 5 years of service received $1.18; those with a shorter service period received 59 cents for each dollar subscribed. Withdrawals are permitted after 10 years, except that women with 5 years of service who leave because of marriage receive full benefits, as is also true of employees of any service period laid off while in good standing. Those who leave before 10 years of service or are dismissed for inefficiency or misdemeanor receive their deposits plus 5 per cent interest compounded semiannually. Under this scheme, a man who has earned $100 a month for 20 years would have credited to him cash and securities totaling $17,819, of which he deposited only $1,200.[1]

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[1] National Industrial Conference Board, *Effect of the Depression on Industrial Relations Programs*, p. 5.

In 1933, the United States Steel Corporation offered 200,000 shares of common stock of the company to employees at $27 a share. Including these shares, employees hold approximately one-eighth of the total number of shares outstanding. Although no dividends were being paid at the time this offer was made, special benefits of $2 a share during the first 2 years, and $3 a share during the remaining 5-year period of purchase were given those who bought the stock when offered.[2] In the Kohler Company, workers are permitted to buy the company's 7 per cent preferred stock in an amount depending upon length of service, payments being made by means of monthly payroll deductions based upon the amount purchased.[3] In 1915, the Leeds and Northrup Company first introduced employee stock ownership, and, by 1932, workers owned 46 per cent of all common stock of the company.[4] One class of stock, known as "employees' shares," carries with it full voting rights and composes the basis of employee ownership. These shares may be held by only those workers selected from a group with at least 5 years of service and with earnings of at least $1,500 per year. They are not distributed upon an installment plan, and, upon leaving the organization, the shares must be sold to another employee who is acceptable to the management. The price of these shares is determined by taking an average of company earnings over a 5-year period. On June 30, 1933, no less than 1,851 employees of Procter & Gamble held 114,854 shares of company stock, purchased by means of weekly payroll deductions and dividend earnings.[1] The Standard Oil Company of New Jersey has a liberal stock purchase plan whereby it is possible for an employee with 1 year of service to buy shares upon the installment basis, the company contributing 50 cents for every dollar subscribed by the worker.[2] An unusual feature of this plan is that the purchase price of the stock is adjusted twice each year. Other notable plans are offered by such companies as the American Telephone and Telegraph Company, General Electric Company, Philadelphia Rapid Transit Company, and the Consolidated Gas Company.

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[1] *American Business*, vol. 7, May, 1937, pp. 15–16.

[2] *Management Review*, vol. 22, April, 1933, p. 117.

[3] BALDERSTON, C. C., *Executive Guidance of Industrial Relations*, 1934, p. 136

[4] *Ibid.*, p. 149.

Failures and Their Causes.—Citation of the above facts is not intended to convey the idea that all employee stock-ownership plans have been an unqualified success. A number have failed to achieve the purposes for which they were designed. Failure has been due to many causes. Frequently employees have lost interest in the plan and have discontinued their payments, or, if payments have been completed, they have disposed of their holdings when market quotations offered a profit or showed evidences of decline. In many cases, unforeseen circumstances have prevented the completion of payments or forced the premature sale of paid-up stock. Not infrequently failure has been due to certain deficiencies in the nature and administration of the plan. It appears that the greatest success has been achieved by those plans in which stock is either given to employees or where the company makes a significant contribution.

Conditions of Success.—In those plans which require the employee to pay the complete cost of the stock, success seems to be contingent upon certain conditions. First, the relative percentage of skilled and unskilled workers employed and the type of employees generally attracted to the company are conditioning factors. Skilled workers who have larger incomes are more likely to participate in the purchase of stock than unskilled, although there are notable exceptions. The prosperity of the company is a second factor. Concerns whose prosperity is fairly continuous and whose stock is generally regarded as high class usually have little difficulty in operating successful employee stock-ownership plans. The task is more arduous for smaller companies. A final condition of success is the relative amount of holdings in the hands of executives. Where executives in important positions show a disposition to purchase a considerable number of shares of stock and have complete confidence in it as a form of investment, emulation seems to spread among the rank and file of employees and stock subscriptions mount.

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[1] *Ibid.*, p. 168.

[2] *Ibid.*, p. 189.

Opposition to the Movement.—There is considerable opposition to the movement for employee stock ownership. Antagonism is evidenced in many places. Socialists and others who sponsor movements for the destruction of capitalism and the reorganization of society on a collectivist basis look with disfavor upon such schemes as tending to strengthen the workers' faith in the existing social order and to weaken the intensity of the class struggle. Discontent is the foundation of successful radicalism and any compromise with capitalism is frowned upon. Trade unionists, who in the United States are inclined to accept capitalistic civilization, oppose employee stock ownership and similar ventures in personnel administration on the grounds that these schemes are designed to serve as a substitute for independent collective bargaining and aggressive unionism. With such welfare plans, it is asserted, the employer hopes to divert the attention of the workers from the more important matters of decent conditions of employment, desirable standards of wages, and respectable hours.

Many employers fail to find in such schemes any hope for the improvement of industrial relations. Several objections are urged. Stocks are viewed as essentially speculative in nature and hence unsuited to the small savings of the working class who can ill afford to lose. An employee's holdings are usually so small that his financial interest in the enterprise can hardly be stimulated through the knowledge that he owns a few shares of stock in it, especially when, as in many cases, his stock carries no voting power. It is further urged that such plans do not conduce to stabilization and loyalty, since the possession of a few shares of stock would not deter the average employee from leaving the service of the company should he desire to seek employment elsewhere. Finally, it is stated that experience with employee stock ownership in the United States is not reassuring with regard to its effect upon efficiency, economy, thrift, good will, and the conversion of radical workers to a more conservative point of view.

There is doubtless a tendency in some quarters to exaggerate the influence of employee stock-ownership plans upon the democratic ownership of industry. In this particular result, the surface is barely scratched. A study of the ownership of corporations made by the Federal Trade Commission indicates that the workers as yet have only an insignificant share in the total ownership of industry. This report showed that employees comprised 7.5 per cent of the common and 3.5 per cent of the preferred stockholders, but employee holdings represented only 1.5 per cent of the common and less than 2 per cent of the preferred stock.[1] Nor does it seem that officers and directors fare as generously in corporation ownership as is often assumed. Of the total common stock holdings, officers and directors apparently owned about 10 per cent. They held 6 per cent of the total preferred stock. In number, however, officers and directors constituted only about 2 per cent of the total common stockholders and only about 1 per cent of the preferred.[2] While such data may be looked upon as belittling the growth of employee stock ownership, they may as legitimately be interpreted as an index of the extent of the problem and the need of greater vitality.

The most serious of all weaknesses of these schemes has been clearly emphasized by the experience gained during the years of the great depression. The average of 35 stocks sold by 31 different companies in employee stock-ownership plans was 98⅞ in 1926, 115 in 1929, 107 in 1930, and 14⅞ in 1932. Under the plan of one large bank, stock sold to employees at $200 a share was still being paid for in installments after it was being quoted on the market at $14 a share.[3] An officer of another bank sums up this difficulty by stating:

> Our stock purchase plan has been very hard on low salaried employees. Our net conclusion is that the bank will not again promote such a plan, and that stock will be sold to employees only outright. The average employee seems to take the position, where the bank promotes a plan of payment over a long term, that the bank assumes a moral obligation to maintain the value or price over the term of payments. On a rising market the plan is most successful; on a falling market it complicates relations with the employees beyond any benefit conceived.[4]

The only escape from this criticism is for the company to purchase the stock for employees. However, in the degree to which this is actually done the plan ceases to be a stock-purchase plan, although certain advantages may still accrue through employee ownership. Whatever objections may be raised against the movement, it is certainly an improvement over the old restricted ownership of industry, and the efforts of employers to share ownership with the largest possible number of employees deserve commendation. If by such plans the traditional master and servant conception of employment relations can be destroyed, much will have been accomplished toward the assurance of industrial peace. For, after all, the workers' benefits under these plans are evident and direct, and those which accrue to the employer are less obvious and are indirect. The company does not obtain a higher price for its stock when it sells to employees; more often it gets a lower price. Moreover, the influence of stock ownership upon the worker's output is not always positive.

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[1] Federal Trade Commission, *National Wealth and Income*, 1926, p. 7.

[2] *Ibid.*

[3] Industrial Relations Section, Princeton University, *Personnel Programs in Banks*, 1935, p. 36.

[4] *Ibid.*, p. 38.

Some Necessary Precautions.—If the movement for employee stock ownership is to achieve greater success, it will be necessary to exercise sound judgment and adopt frankness in the inauguration of the plans. Not all companies are in a position to offer stock to their employees; the shares of some concerns do not constitute a desirable form of investment. The worker cannot afford to speculate, so only those firms should offer stock whose business is well established and whose securities enjoy a reputation for steady earnings. Similarly, not every wage earner is in a position to invest in stock, so a company should not endeavor to include all its employees in the plan. In introducing the plan, it is imperative that the nature of the investment be discussed frankly with the employees and its attendant risks and probable gains clearly outlined. Otherwise, if business adversities develop, the workers will hold the company completely responsible for their losses.

Under no circumstances can a company be justified in allowing overinvestment on the part of employees. Scrupulous honesty and truthfulness must characterize all representations concerning the plan, and its interpretation must be always reliable. Voting privileges should be granted with all stock issued to employees, but the importance of voting power must not be exaggerated. In certain large companies, employees own about one-tenth of the stock, in some others they own from one-fourth to one-third, but this is far from assuring control of company policies through the exercise of voting privileges, since in joint-stock concerns a democratic basis for voting does not obtain. The employer should not harbor the impression that the stock-ownership plan will immediately establish an indentity of interests, or that in the absence of decent conditions of employment it will conduce to harmony.

The desirability of employee stock ownership can hardly be questioned. Few will deny that employees who are familiar with the everyday operation of the enterprise tend to make a better class of investors than the absentee holders of stock who never see the industry and are interested only in its capacity to pay dividends. Moreover, if employee stock ownership assures greater diffusion of industrial ownership and elevates the wage-earning class into a capitalist class, it will be welcomed by all who believe in constructive economic change. If, to the worker's earned income, employee stock ownership adds an appreciable investment income, the severity of economic insecurity will be diminished. The movement is essentially a capitalistic one and is designed to open the door of ownership to the worker. This is a sufficiently legitimate basis for any stock-ownership plan. It is a far better reason for the movement than those which develop from a wish to conceal undesirable conditions of labor or to smother spontaneous attempts to unionize for self-defense.

CHAPTER XXI

THE EDUCATION AND TRAINING OF EMPLOYEES

Need for Training Programs.—In periods of economic recovery and general business prosperity, employers are very likely to need a new and better labor supply. Perhaps at no other time in the history of the United States has this need for better trained employees been more keenly felt than during the period immediately following the 1930–1934 depression. By 1937, production had reached an all-time high, and employment had at least reached its predepression level. In a number of industries, there were acute shortages of competent and well-trained workers, especially in certain industrial centers of the nation.

There are several important reasons why this demand for skilled workers should be felt during normal times; there are other obvious reasons why it was experienced in 1936 and 1937. The Department of Labor has estimated that there occurs an annual loss of 5 per cent in the employment ranks of the average organization, due largely to normal labor turnover, promotions, death, superannuation, and change of occupation.[1] Thus, in the city of Detroit alone, among 66,000 skilled workmen who were employed during 1937, some 3,300 normally would have to be replaced during the year. To meet this situation, the manufacturers of that city have organized under the direction of an Employers' Association an intensive apprenticeship system, which has been supported by over seventy-four firms.[2]

The need for well-trained workers is greatly accentuated by poor business conditions for two simple reasons. At that time industrial production is curtailed and many skilled workers are thrown out of their regular employment. As the months and years of unemployment pass, those unfortunate enough to have lost their jobs succeed in gaining employment finally in some other line of private endeavor, accept relief, or are forced into complete idleness. In any event, the result is the same; their skill is soon lost, and when business conditions again warrant reemployment many thousands of once competent skilled workers are unable to requalify for their old tasks. The second cause of shortage, also a depression product, is found in the fact that the pressure of economy or the decrease in labor turnover experienced during a period of inactivity leads individual organizations to curtail new placements and training programs. Thus, by the end of the depression period, there is an accumulated shortage of properly trained workers.

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[1] See *American Machinist*, vol. 81, May 5, 1937, p. 363.

[2] CARPENTER, O. F., "Detroit Trains," *Factory Management and Maintenance*, vol. 94, July, 1936, p. 7.

But there are still other fundamental reasons for the need of better training. In practically every country where industrialism has matured, there is a current belief that wage earners are not producing efficiently and that spoilage and waste are far in excess of the unavoidable minimum. After carefully studying the relative efficiency of workers within his organization, one large Eastern industrialist concluded that the unskilled workers and those doing routine clerical jobs (under average supervision) were approximately 50 per cent efficient; that the average machine operators, or those doing routine work with mechanical equipment, were about 38 to 40 per cent efficient; that the general all-round mechanic, who was left to plan his own work, was about 30 per cent efficient; that the highly skilled all-round toolmakers, tool draftsmen, and patternmakers were about 25 to 28 per cent efficient; and that the pieceworkers and premium workers were about 70 per cent efficient.[1]

The responsibility for these deficiencies rests upon the shoulders of management, and not upon the workers. Such deficiencies are due largely to poor selection, training, and supervision. If the average worker is 75 per cent efficient and his wage is 50 cents per hour, with 50,000,000 gainfully employed throughout this nation approximately $50,000,000 is lost every working day through inefficiency, much of which can be saved by better selection, proper training, and scientific supervision and planning.

In further explanation of this economic waste, it is claimed that output is below potential capacity because men are not interested in their jobs, and that frequently the reason they are not interested is that little or no attempt is made to equip them properly through training for the successful performance of their work. Men and women are likely to be most interested in those things which they understand best and to manifest a distinct lack of interest in things about which their knowledge is inadequate. This circumstance offers many opportunities to the field of employee training.

The principal burden of such training will always rest upon employers. The operations of each organization are so numerous and the conditions in each enterprise so different that no institution outside of industry and apart from actual production can fully equip individuals for the demands of each line of business. Even if our schools were capable of properly training employees for industry and if society would sanction the assumption of such a responsibility, circumstances would still make it imperative for each establishment to provide its own system of training. It is extremely difficult to recruit workers for training outside of industry. Bodily and mental fatigue, family duties, and other expenditure of time and energy make it impossible for all except a small minority of industrial wage earners to attend continuation classes. The last Federal Census disclosed the astounding fact that one and one-third million children under sixteen years of age in the United States were out of school in 1930.[1] A large number of these children had not completed the work beyond the fifth and sixth grades. Only half of the pupils reaching the fifth grade survive to enroll in the junior year of high school, and less than 40 per cent of the fifth graders are graduated from high school.[2] Almost one-sixth of all children fifteen years of age and one-third of all those sixteen years of age are out of school.[3] Our continuation school laws, which require a child to attend school during a certain number of hours a week until the age of seventeen or eighteen years, even though engaged in a gainful occupation, are helping to meet the situation, but they are by no means a complete solution of the training problem.

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[1] ALFORD, L. P., *Laws of Management*, pp. 91–92.

In years past, American industry has absorbed thousands of immigrants, large numbers of whom were totally unfamiliar with the technique of modern machine organization. The responsibility for providing adequate opportunities for increasing the technical efficiency of these workers rested almost exclusively upon employers. Vocational education, including part-time continuation instruction, which has made such phenomenal progress in the United States during the last decade, must be considered a supplement to and not a substitute for training in industry and on the job. Cooperation between industry and the schools will, of course, always be beneficial.

The Purposes of Training.—The specific purposes of employee training will depend upon the needs of particular organizations, but there are certain general objectives common to all such instruction.

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[1] United States Department of Commerce, Bureau of the Census, *Fifteenth Census of the United States*, 1930, p. 1091.

[2] FOSTER, EMERY M., "School Survival Rates," *School Life*, vol. 20, September, 1936, p. 14.

[3] United States Department of Commerce, *op. cit.*, p. 1093.

Training seeks to produce better equipped workmen with a view to enhancing the efficiency and output of industry. Employers are interested in training primarily from the standpoint of its influence upon production and profits. But training may also have a more manifestly social purpose. The acquisition of trade knowledge, skill, and experience constitutes a source of larger income; and larger income means raising one's standard of living. The assurance of the basic necessities of food, shelter, and clothing, a modicum of luxury, educational opportunities, and more adequate preparation for the larger responsibilities of life are all dependent upon sufficient income. In so far as employee training makes these things possible, it fulfills a distinctly social function.

Frequently, individual employers have other motives and purposes in introducing special facilities for training, all of which directly or indirectly enhance occupational efficiency. These include such objectives as the stabilization of the working force, increase of industrial good will and cooperation, elimination of waste and spoilage, provision of a reserve of skilled workmen, determination of the trade knowledge and skill of new employees, upgrading of old employees, proper adjustment of wages to work, and instruction to help the worker gain a better knowledge of business conditions and the problems of industrial relations.

Types of Training.—Training plans in America are sometimes classified according to their specific purposes as follows: (1) those designed to teach a particular task or operation—*job training;* (2) those intended to teach all the fundamental theories and practices of a given trade—*trade training;* (3) those which aim to give the workers a general knowledge of an industry or business—*general industrial* or *business training;* and (4) those intended to acquaint the worker with certain cultural and civic subjects—*cultural and citizenship training.* Commonly referred to also are *cooperative training courses, introductory training courses* for college students, *special courses* for clerks, civil servants, etc., and *foremanship and executive training plans.*

Job Training.—The term "job training" refers to the various intensive special training courses which are designed to improve directly the working capacity of the employee. Just as apprenticeship training aims to acquaint the learner with the principles and practices of the whole trade, so job instruction purposes to give a thorough knowledge of a specific operation and of the tools and equipment used therein. Job training assumes various forms. Vestibule training which comes at the time the worker enters the service of the company, and the upgrading or improvement of old employees who feel the need of additional instruction or who must learn a new process are the chief forms. The term "vestibule school" is applied to a form of instruction where a few employees are taken into a group and given a specific training on repetitive processes. Such a method of instruction is sometimes necessary when the demands on production are extraordinary, a change is made in the article which a plant manufactures, or the rate of labor turnover is excessively high.

Job training is an inevitable sequence of modern industrial development, which requires operators of machines rather than mechanics who are skilled in all the rudiments of a trade. Usually the elements of a job can be taught the machine operator in a few hours; at most, only a few weeks or months are necessary. In the steel industry, this system is known as "learners' training," the learner usually being a middle aged person who enters the industry. He is able to carry on normal production after a period of 60 days during which he has been carefully coached.[1] But modern machine methods do not eliminate the need for some kind of systematic instruction. As Mr. Gantt has stated:

> The ordinary man, whether mechanic or laborer, if left to himself, seldom performs any operation in the manner most economical either of time or labor, and it has been conclusively proved that even on ordinary work a decided advantage can be gained by giving men instructions as to how to perform the work they are set to do. It is well known that nearly every operation can be, and in actual work is, performed in a number of ways, and it is self-evident that all of these ways are not equally efficient.[2]

Generally speaking, there are two methods of training; namely, in rooms separate from the factory but equipped with all the tools and machines necessary for successful instruction in production processes, and directly on production in the shop. In the small factory of less than 200 employees, the machine worker can be trained on the factory floor by the foreman, special instructor, or someone else designated for this purpose by the superintendent of production or the department head. Such a method has the distinct advantage of training on actual production and under the practical conditions which will prevail after the period of learning is over. Moreover, it involves very little initial expense, makes for proper coordination of training with production activities, tends to result in a marked stimulation of interest in the operation, and makes possible continual absorption of trained employees.

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[1] STILLWELL, CHARLES J., *Steel*, vol. 100, Mar. 29, 1937, p. 62–63.

[2] GANTT, H. L., *Work, Wages, and Profits*, pp. 35–36.

Experience suggests that for large establishments the most proficient method of carrying on job instruction is the organization of a separate training department, under the direction of which instruction is given in a separate building or room by special groups within the production department. The training department makes possible better control and more complete supervision. When run as a model factory or office with up-to-date machinery and equipment and first-class instruction, it produces efficient workmen and increases output.

> It can be used for the training of new help unskilled in these branches, for upgrading deserving help already employed, or for bringing up to standard workmen with poor production records. It can be used very effectively in testing out new applicants who claim to have had experience in the jobs for which they have applied. . . . In many factories the training room serves as a laboratory where new tools or methods of operation are tried out and studied, or where older processes are improved.[1]

The privacy, isolation, and close supervision which the separate training department makes possible are conducive to the most rapid progress on the part of the learners. Noise is reduced to a minimum. Moreover, it makes unnecessary any contact with nonhelpful employees, and keeps the learner from copying bad habits of workmanship which are sometimes prevalent among older workmen.

The Vestibule School.—The vestibule school involves a special type of job-training organization in which the employee is taught the intricate processes of his job by special instructors hired chiefly for that purpose. It includes some academic work as a rule, and the school is usually separated from direct control of the production or operation department. Brief but intensive preliminary training for a particular job or operation is provided. Such a school has many advantages and not a few disadvantages. Instruction does not interfere with the normal course of operation. Breakage and waste of materials due to carelessness and inadequate supervision are minimized. Because he is made familiar with correct methods at the beginning, the new worker is less likely to develop wasteful and inefficient habits of work. Experience indicates that turnover is greatest during the first few weeks of work and often results from the failure of untrained workmen to make a rapid and satisfactory adjustment to the job. Vestibule training takes the major portion of labor turnover from the shop to the school and aids in proper adjustment. Workmen and foremen are able to devote their entire time and energy to the routine duties of the shop, since special instructors are employed to teach new workers.

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[1] *United States Training Service, Bulletin* 14, p. 14.

Better sequence of work in good instructional order can be maintained in the vestibule school than in the shop, and, as a result of this training, uniform standards of quality can more easily be established throughout the plant. Since learners are taught the general rules and regulations governing the habits and daily routine of the men, factory discipline is simplified. Emergency demands can be met more easily by a systematic course of training than in the factory amid the confusion of production. Finally, working conditions in the training section are less likely to cause nervousness and discouragement than when learners are placed alongside experienced employees. This is especially true of young persons and women.

Many employers who have tried the vestibule method suggest objections and disadvantages. Because the number of employees to be trained for a given operation fluctuates greatly, it may not be economical to retain full-time instructors or maintain school equipment. Commercial production is not always attainable in the vestibule schools, and work on actual production seems better than that done for practice purposes on waste materials. Moreover, beginners tend to attain maximum production more quickly when associated with expert workers than when among unskilled companions in the school. The spirit of the students in the school tends to become that of careless learners rather than that of earnest workers. The schoolroom attitude rather than the shop attitude is likely to prevail. Then, too, because it usually limits the operator to one, or at most a few, simple operations, vestibule training often becomes superficial, giving the worker no broad understanding of general shop practice.[1] Although he is enabled to reach quickly a point where he can earn fairly good wages as a machine tender, his future progress is blocked because he does not have sufficient training in the fundamental principles of mechanics.

There is a marked tendency in America today to abandon the short training plan which was inaugurated in the form of vestibule schools during the unprecedented emergency of the World War. The more comprehensive program of instruction which is being adopted covers such topics as the following:

> The character and sources of raw materials used; the general processes of manufacture and their relation to each other; the purpose and elementary

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[1] *Federal Board for Vocational Education, Bulletin* 48, pp. 55–66.

principles of scheduling and planning; the meaning of mechanical or technical terms commonly used; the purpose and methods of inspection; quality standards; the use of micrometers and gauges; blueprint reading; interpretation of job tickets and instruction sheets; the care of machines and tools; elimination of waste; safety and hygiene; cooperation with the medical and employment departments.[1]

Where the operations of a plant are, for the most part, repetitive, the short, intensive system of training will always be necessary, and with rapid progress in specialization and standardization such training will probably become even more important. These intensive courses are not expensive. The pay during the training period is generally from 10 to 15 per cent lower than the rate paid for the same work on actual production. In many cases the value of the products from the training departments covers the cost of operation; in others, the net cost per capita is placed between $8 and $100, seldom at the higher figure. An investigation made by the United States Training Service some years ago revealed the fact that in 90 per cent of the reporting companies the learners' output exceeded the cost of training.[2]

Apprenticeship Training.—The old apprenticeship system which required several years of contract service was objectionable in several particulars. Frequently the master craftsman disregarded not only his sworn obligation to provide cultural and moral education, but also his obligation to teach the apprentice complete mastery of the trade. As the industrial organization became more complex, the apprentice was looked upon as a source of cheap labor, fairly efficient but not expert, and he was left to pick up the trade as best he could from some disinterested journeyman. It was common practice during the first year to keep the apprentice at tasks totally unrelated to his trade, such as running errands, sweeping the shop, and doing simple bench or office work.

Frequently the time required to complete the apprenticeship was much too long, with the result that after he had mastered the fundamentals of the trade the apprentice was forced to remain in the shop at a low rate of pay, thus being deprived of any incentive to perfect his craftsmanship. Moreover, he often discovered that the skilled worker and foremen assigned to the duty of teaching him the trade were unqualified to teach or tended to overemphasize relatively minor points to the exclusion of major ones. Cutting across all these weaknesses in the old system was the fact that a period of time rather than the achievement of proficiency was the criterion of trade mastery. It cannot be said that the situation was greatly improved when, in later stages of its development, the apprenticeship system was taken over by trade unions as a means of controlling entrance to the trade and limiting the supply of skilled artisans.

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[1] *Ibid.*, p. 55.

[2] CLAYTON, C. T., *Industrial Management*, vol. 57, April, 1919, pp. 311–313.

But the introduction of new industrial processes, especially the perfection of the automatic machine, standardization of operations, minute specialization of tasks, and scientific control of production, has revolutionized industrial training. These changes in the technique of industry reduced the numerical proportion of skilled craftsmen to the unskilled, increased the ratio of semiskilled technical men, modified the trades, and reorganized industry so thoroughly that lines of promotion and advancement were changed. While the old apprenticeship system controlled by organizations of skilled craftsmen still survives in such trades as building and construction, the invasion of the machine is rapidly making for more liberal and systematic plans of training. The production methods of most employers no longer require long-time indentured service. Other forces, chief of which have been the opposition of trade unions and employers, high wages, white-collar jobs, and the prevalence of unemployment over long periods of time, have also contributed to the disintegration of the old apprenticeship system.

National Apprentice Training Plan.—An important modification of the old apprenticeship system has recently made its appearance in this country in the form of the National Apprentice Training Plan under the sponsorship of the Federal Committee on Apprentice Training. Apprenticeship under this national system involves adherence to several standards of employment. First, an apprentice under the plan is "a person 16 years of age or over who has entered into a written agreement (indenture) with an employer, an association of employers, or other responsible agency providing for more than 2,000 hours of 'reasonably continuous' employment in conjunction with an approved training program." This agreement stipulates the extent of the apprenticeship and probationary period, the schedule of processes or tasks to be learned, an approved plan of related technical training (often given by a cooperating school), the wage scale to be followed, and the hours of work involved.[1]

The second provision of this national plan calls for the establishment of national, state, and local joint apprentice committees, composed of members of the trade or industry concerned, whose duty shall be to recommend standards, regulations, and policies for the administration of the plan. A keyman, usually the vocational education director, an officer of an employment office, or a field deputy of the State Department of Labor, leads in the promotional work. Once the plan is approved by a local trade organization, the member employer who establishes a training program is assured of the continued service of the apprentice under the indenture, the worker is assured of the broad training desired under stipulated hours and wages, and the public is again offered the advantages of indentured apprenticeship training with many of the objectionable features of the old system removed.

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[1] PATTERSON, W. F., "Indentured Apprenticeship," *Personnel Journal*, vol. 15, September, 1936, pp. 96–97.

The third standard provides for a written contract between employer and employee. And the fourth provides for the issuance of a certificate upon completion of the indenture period. This new system thus places less emphasis upon the time element and more upon ability and achievement, makes for a certain measure of specialization, provides a finer balance between theoretical and practical instruction, and offers protection to both parties to the agreement.

The purpose of the new apprenticeship system is to improve the conditions and character of practical training and experience gained during the term of indenture and at the same time to give a desirable amount of instruction in related subjects. With the provision of special training facilities and adequate superintendence, apprentices are no longer at the mercy of a foreman or an older workman who possesses no interest in teaching or who gives only a narrow range of instruction in some division of the trade, with no theoretical instruction at all. Rather are they offered a well-rounded trade training with sufficient experience to make them intelligent craftsmen worthy of advancement and a good wage.

The requirements for entrance and the term of indenture vary with the nature of the industry or business. The time of the apprenticeship is usually divided between the shop and the classroom. In the shop there is a regular schedule of time for each machine, process, and division of the trade. The apprentice goes from one department to another in order to become acquainted with and proficient in the various types of work in the establishment. In some cases, the foreman of each department designates the assistant foreman or some expert older workman to instruct the apprentice but all plans for instruction have to be approved by the apprenticeship committee. For this reason, there is a marked tendency now to provide special instructors who know their trade and are able to teach it. All work done by apprentices, whether in the training room or in the shop, tends more and more to be a part of regular production. This practical aspect of training has a distinctive appeal. After a year or two in the training room, depending upon the length of the course, nature of the trade, and adaptability of the youth, the apprentice is transferred to one of the branches of the industry or business to complete his training. Always, however, he is under the supervision of the training department cooperating with the foremen or instructors.

Considerable variation obtains in the matter of remuneration. Some companies pay the basic labor rate and promise to give the apprentice a graduation bonus of $100 or more, plus $50 additional if he is still in the service of the company 6 months after completion of the course. It is a common practice to vary the amount of pay according to the type of work that is being learned and to provide for a progressive increase each year. Many companies advance rates quarterly or semiannually. In all cases, the wage scale fluctuates with the conditions of the industry and the prevailing rates for regular labor. Advancement often depends upon accomplishment, and the learner is given an opportunity to finish the trade in less than normal time. Other incentives include an annual vacation for those who do unusually well and special consideration to the most deserving graduates in the filling of executive positions.

Introductory Training for College Students.—More and more, the larger organizations of the country are looking to the institutions of higher education for promising graduates who can be placed in special training courses in preparation for highly specialized duties or positions of junior and executive responsibility. As early as 1925, one university reported that it was approached by eighty-five different organizations seeking to employ its graduates. The number of companies doing this sort of work has increased materially of late because of a deeper appreciation of the value of general university training as a background for specialized training courses. A glance at a few plans now offered by companies representing typical industries will indicate this.

1. *The Goodyear Flying Squadron.*—One of the most interesting and best known of these training plans for college graduates has been maintained for a number of years by the Goodyear Tire and Rubber Company. In 1923, this company recognized the disadvantages resulting from the high degree of specialization which characterizes modern industry. Practically all workmen in the modern factory achieve a remarkable degree of efficiency in the operation assigned

them, but the organization as a whole suffers from the resulting lack of versatility and mobility. Men trained for specific operations are incapable of filling other positions in the organization and so cannot be shifted about readily to meet particular needs and emergencies. For instance, a few absentees in one department may slow down a dozen men in another department and cause many more to be idle. These men cannot be used in other departments with whose operations they are unfamiliar. The traditional remedy for this situation is to keep on the payroll of all departments more men than are really needed. Such procedure is not only uneconomical but frequently futile, because the number of absentees and withdrawals often exceeds the number of surplus employees.

In place of the wasteful and inefficient system of employing surplus workmen in every department, some factory managers, notably those of the Goodyear Tire and Rubber Company, conceived the idea of maintaining one group of surplus workers skilled in the work and operation of all departments, who can fill in wherever more men are needed to balance production. This was the genesis of the Flying Squadron. The new plan has proved cheaper than the old method and is better insurance against slowdowns and tie-ups. Experience indicates that fifty workmen whose college training is sufficiently comprehensive to qualify them for the Flying Squadron are capable of doing work equivalent to that of several times their number of specialists scattered throughout various departments. Moreover, the cost has been less and the scheme has produced a group of workmen who, to a remarkable degree, work with a spirit and breadth of vision that have toned up the whole factory organization.[1]

Membership in the Flying Squadron means an opportunity to learn the whole business of manufacturing rubber, so the best workmen are attracted to it. Successful candidates are placed in one department after another until they are familiar with every operation in the industry. Practical training is supplemented by several hours each week in the classroom, where the men get theoretical instruction on company time. Here they are taught the policies and methods of factory organization and management. Training continues through 3 years, and at the completion of the course the men are graduated as Master Rubber Workers. In the meantime, they receive regular piece rates, with minimum guarantees to cover periods during which they are learning an operation. As soon as they have mastered one task, they are shifted to another until twenty-three or more major operations have been learned. Monthly reports on various phases of the work are required, and the progress of each member is observed and rated. Throughout the entire course, the learners come in contact with the principal executives of the factory, and there is a stimulating influence in the fact that these officials manifest a keen and constant interest in their progress. When the course is completed, the men know all about cleaning the raw material, mixing the "batch," treating the fabric, building up the tire, applying the tread, and storing the product. The members of the Flying Squadron are given preference in the assignment of steady employment, being the last to be laid off when operations are curtailed.

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[1] LITCHFIELD, P. W., "Our 'Flying Squadron,'" *Factory*, vol. 24, Mar. 1920, p. 611.

The results of this plan have been gratifying. It has promoted contentment, improved the morale of all workers in the company's widely scattered plants, diminished the number of wasteful practices, assisted materially in solving new problems of production and introducing new processes, and furnished recruits for responsible executive positions. A very large proportion of the members of the Flying Squadron are promoted, usually to executive positions.

2. *The Loop Course of the Bethlehem Steel Company.*—At the first of each year, the Bethlehem Steel Company begins to choose outstanding students interested in working into the steel industry. Concerning the responsibilities of this work, Mr. E. G. Grace, president, states:

> Until a few years ago, the men entering this business gained their technical knowledge only through years of experience in the mills or in the offices. And there is still no substitute for experience. There never can be. Yet today through sound training in the classrooms and laboratories of colleges and universities, men are acquiring a fundamental knowledge of the problems which they will face in their chosen work. And with their knowledge they are gaining understanding—an understanding which when properly applied will make their work more enjoyable and more effective. . . .
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> Our organization has faith in the college man. We need him in our business and he needs us. The spirit of mutuality carries through every endeavor. Hence there is a balance between the man's usefulness in the industry and the qualities which he must have. He must have the ability to get along with men, to understand those who have had lesser opportunities and to realize that in various instances men without formal educational background may have acquired superior common sense, knowledge, and judgment. The college man has exceptional opportunities. But, if he would be successful, he also has responsibilities. He must learn to work hard and like it. He must temper his approach to technical problems with

practicability. He must examine himself, discover his weaknesses and correct them.[1]

The name "loop course" originated in the practice of taking students who join the course on a loop of activities of various types in order to give them a background of company practices and policies. The course is designed especially for college graduates, and is divided into three general parts. The first part is made up of a 4-week training period at the Bethlehem plant, during which time the general features of the company are covered, including the plant properties, products, operations, policies, and activities. Lectures, talking films, and daily trips through the various departments of the Bethlehem plant give the student an intensive picture of the entire organization in a relatively short period of time. During this period the men are guided either into the general fields of production or sales.

The second phase of the training is composed of the assignment of men to actual production as regular employees of the company at different steel mills throughout the country. Each plant then takes its assigned group and inaugurates an intensive production-training plan, made up of classroom and plant work. During this time, those in charge make such observations as will lead to the placement of the newly recruited graduates in positions for which they are best fitted.

In the third division of the program, those who are chosen during the introductory period for sales work are scheduled to spend a week in each of the various product sales divisions of the home office. This requires at least 4 months, during which time the future salesman has an opportunity to familiarize himself thoroughly with the company's principal products. They also discuss sales problems with managers and members of the staff, observe sales procedure, learn terms, and become familiar with such matters as pricing policy. Following this, another 4-month period is spent in the steel plants. Written reports are required at the end of each visit. All sales candidates are required to take this course.

The last phase of this program allows for a second period of training for men who are candidates for all divisions of work except production and sales. In the case of purchasing, accounting, industrial relations, and research, candidates take their special work in their respective departments. For instance, in the industrial relations department, candidates are trained by actual work assignments in the plant so that they may become acquainted with employment procedure, interviewing, personnel policies, representation plans, pensions, relief, accident prevention, and all other work connected with this department of the company.

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[1] Bethlehem Steel Company, *The Loop Course*, p. 1.

Admission is by application only, and health requirements as well as other qualifications are quite severe. The company pays $125 per month during the first phase of the training period, after which time both earnings and advancement depend upon the individual. Usually 2 or 3 years are required for the college graduate to complete the training program and become adjusted to his new position.

3. *General Electric Test Course*[1] *and the Westinghouse Graduate Student Course.*—The long standing policies of college graduate internship formulated by two of the nation's largest manufacturers are well known to all personnel directors. The General Electric Company's Student Engineer's Training Course, or Test Course, is based upon the assumption that even though the engineer's broad technical background is best obtained in technical institutes and colleges, there are special practical viewpoints essential to success which can be gained best while the student is actually employed in various divisions of the company. Therefore, the test course leads directly to assignments in all departments of the organization, and its application is not limited to those who have had only electrical engineering. The research laboratory, divisions of production, accounting, sales, and general administration all offer the advantages of postgraduate training over a period of 12 to 15 months, during which time fair wages are paid to those who join the company. Normally between 200 and 400 men are placed on this program each year. Upon completion of this basic course, graduates may enter other more specialized courses, such as sales, factory, and business training.

The Westinghouse Electric and Manufacturing Company has recruited executives and experts for more than 35 years from graduates who have entered the organization from technical institutions. A "graduate student course" has been established to provide work during the training period. Work assignments in various departments of the company, together with certain special study assignments, take up most of the time of the student. A somewhat similar graduate training course has been in force with the Western Electric Company for over 15 years.

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[1] A very helpful description of this plan, together with that of certain other plans, is contained in the Metropolitan Life Insurance Company's *Recruiting and Training College Men in Business.*

4. *Floating Training Courses of Banks.*—For a number of years most of the larger commercial banks of the country have been offering special training opportunities to a few selected graduates each year. Unfortunately for many applicants on the "outside," the grounds for admission are seldom subject to fair competition, and as a result those with strong bank connections are usually the ones who are successful in securing the opportunity for such training. The training usually consists of "floating" from one department of the bank to another, spending enough time in each department to learn the various practices. The usual training period is a year, but a promising student may pass from one department to another for 3 or even 5 years before he is placed permanently.

Oftentimes investment houses require college graduates to complete specified training courses before permanent assignments are made, or before advancements will be considered. Sometimes these courses are offered in cooperation with the local Stock Exchange Institute or the American Institute of Banking. The latter organization is sponsored by the American Bankers' Association. In 1937, the Institute had 214 chapters with a total membership of 58,336 persons, 33,261 of whom were enrolled in special institute classes of banking, commercial law, economics, bank management, or credit analysis.[1]

5. *Other Training Programs for College Graduates.*—Notable examples of similar training courses in the retail field are found in the well-established plans of the W. T. Grant Company and R. H. Macy & Co., Inc. Each year the Grant organization solicits various colleges and universities for outstanding graduates who are interested in the retail business. Successful candidates attend a 10-day training school at the company's home office in New York, after which individual store assignments are made, placing the trainee under the direct supervision of a store manager. Training from then on is directly "on the job." The first "on the job" assignment is in the stock room, where a minimum of 30 days is spent. The rest of the training period is spent mostly "on the floor" where window, shelf, and counter display, departmental layout, and sales work are studied. From there, the individual works into assistant managerial and managerial positions.

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[1] Figures from the January and May, 1937, issues of the *Bulletin of the American Institute of Banking.* For 1932 data, see Industrial Relations Section, Princeton University, *Personnel Programs in Banks*, p. 29.

In contrast, R. H. Macy has a formal training program for college graduates. The main objective of its program is to train men in the technique of merchandising. The first part of the training program occupies 13 weeks, 4 weeks of which are spent in actual selling, 2 weeks in training for a section manager, 6 weeks doing the work of a section manager, and 1 week at the floor superintendent's desk. The second part, also made up of 13 weeks, is spent in training (for 4 weeks) received by rotating through the receiving department (4 days), controller's office (5 days), comparison office (6 days), planning duty or other assignment (6 days), special reports and examinations (3 days), and on final assignment and placements (9 weeks). Thus, in 6 months' time the program is completed and placement is made.

Certain transportation companies offer special training courses to graduates from colleges and technical schools. The Pennsylvania Railroad Company offers training obtained successively in the machine shop, foundry, air-brake shop, engine house, car and boiler shops, inspection, accounting, and reporting departments over a 3-year period, at the end of which the students are appointed as motive-power inspectors with prospects of promotion into executive positions.[1] The Nickel Plate road offers a special course for apprentices in the mechanical department open to engineering graduates. This course also covers a 3-year period, and includes special study of such matters as shop practice, road testing, car design, and power station work.[2]

The American Rolling Mill Company, Ingersoll-Rand Company, Otis Elevator Company, Procter & Gamble Company, Deere and Company, Illinois Steel Company, and many others have courses designed especially for training college students in the fundamentals of their individual businesses. In addition there are various training classes designed to qualify graduates for effective civil service work.

Vocational Training.—Sometimes employee training takes the form of vocational training programs sponsored by public schools in conjunction with different groups of employers. The J. Sterling Morton High School of Cicero, Ill., is located in an industrial district of Chicago from which only 5 per cent of eighth grade graduates finish college. By careful selection, certain individuals are chosen from the eighth grade to enter a 2-year vocational course. If the student's work is not up to established standards, he is requested to resign after the first term of school training. After successful completion of school, the students are fully prepared to enter apprenticeship training. Through the cooperation of organizations, such as the Link Belt Company of Chicago, apprentices are placed in industry at an entrance rate of 47 cents per hour in departments where their interests and abilities are strongest. There they can remain until the apprenticeship program has been completed.[1]

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[1] Metropolitan Life Insurance Company, *op. cit.*, p. 15.

[2] *Ibid.*

Cooperation between schools and the Eastman Kodak Company has made it possible for 1,000 employees to attend evening courses covering mechanical work, electricity, sheet-metal work, air conditioning, welding, photography, and business administration. For newer employees, the company has allowed a refund up to one-half the cost of tuition paid for work of reasonably direct practical benefit. The maximum refund for any scholastic year under the scheme is $50.[2]

Cooperative Courses.—A recent development in employee training plans has been the introduction of "cooperative" courses whereby the workers alternate between classroom and shop work. The Textile Machine Works of Reading, Pa., has an apprentice training course alternating 4-week periods in the shop, with 4-week periods in the classroom.[3] This plan was inaugurated in 1927 and, since then, has led to the development of a junior engineering college. After examinations, applicants are accepted in the school and regarded as employees of plants from which they come. The apprenticeship tuition of $50 per year is usually paid by employers, and those completing the apprenticeship programs are granted a bonus of $200 by their respective employers. Fourteen companies are cooperating in this program.

General Cultural Education and Americanization Work.—Many organizations provide their employees with an opportunity to study a fairly wide range of general cultural subjects. Such courses may include almost anything from learning to speak, read, and write English, to cooking, sewing, music, and physical culture. These courses have only an indirect effect upon the industrial efficiency of the worker and tend to improve his value to the company only incidentally, through the general improvement of his intelligence, health, and standard of life.

Corporations which normally employ great numbers of foreign-language groups have long since sensed the need for Americanization work. Americanization means assimilation of American ideas, language, institutions, and standard of living; it is a process of adaptation to the new social environment through which every alien must go if he is to become an integral part of American civilization. Conspicuous disadvantages, if not serious dangers, accrue from the immigrant's inability to read, write, and speak the English language and to appreciate the basic principles, structure, and operation of our governmental system. Accidents frequently occur because employees are unable to read signs and understand warnings. Foreign-language groups tend to persist and breed a clannishness which makes difficult proper understanding between management and men. Misunderstandings arise with regard to the terms of the agreement governing employment, which could easily be avoided if all men understood the English language; and discontent results because the non-English-speaking foreigner cannot converse with many of his fellow workmen and so is unable to enter into the life and spirit of the plant.

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[1] *Iron Age*, vol. 139, Mar. 18, 1937, pp. 38–41.

[2] *Personnel Journal*, vol. 16, May, 1937, pp. 9–11.

[3] *American Machinist*, vol. 80, Mar. 11, 1936, pp. 234–236.

Cultural studies carried on independently by the company or in cooperation with local educational and religious agencies have been offered by numerous industrial enterprises during recent years. Courses offered at night have proved undesirable because of the heavy demands upon the energy and time of the worker. Only the most ambitious will make this sacrifice. The tendency now is to provide instruction classes in the plant or office, which the employee may attend immediately after the close of his day's work or at some convenient intermission during the work period. Attendance is generally voluntary, but special inducements and various kinds of pressure have been employed. Workers are frequently given the opportunity of attending classes for a certain length of time during the working period without loss of pay or, at most, of half-pay. Posters setting forth the advantages of attendance and urging employees to enroll are placed in conspicuous places throughout the plant, and slips are inserted in pay envelopes. Some companies provide a shower bath and lunch for those who attend classes immediately at the close of the workday. Attendance is sometimes insisted upon as a social duty. To compel compliance with their requests, certain corporations have given preference in employment and promotion to those who took advantage of instruction. Whenever it becomes necessary to curtail operations, these men are retained in preference to those who have not availed themselves of educational opportunities.

Americanization has not escaped its share of the criticism directed at every attempt of employers to improve the lot of their employees. Some of the adverse comment has been merited. There can be no doubt that Americanization work is often paternalistic and consciously designed as propaganda to divert workers from channels of independent organization and insistence upon their rights. Most Americanization work, however, especially that which is conducted in cooperation with public school agencies, is a sincere effort to equip the alien with the language and other mechanisms for assimilating American ideas and customs and increasing his earning power. Education is essentially a public function, but, because of the inadequate facilities of our schools and the opposition of conservative school boards, adult education is often disregarded. Concerns thus find it necessary to provide some instruction in English and citizenship. The ideal situation exists where industries and the community cooperate in this important work. Compulsion should not be used, despite the contention that, for the sake of safeguarding our national institutions and creating an intelligent citizenship, it is just as legitimate to compel adults to attend classes as it is to force children to do so. The spirit and results are far better when foreigners take such cultural courses voluntarily.

Some Typical Apprenticeship Plans.—One of the best known ordinary apprenticeship programs of the nation started in 1913 with a conference of a small group of employees in a toolroom of the Ford Motor Company. At that time, the group organized a class which met regularly for the next 2 years in an attic of the home of one of their number. Out of this developed the *Henry Ford Trade School* which opened its doors in 1916 to six students and one instructor. The enrollment had risen by 1931 to 2,800 students under 135 instructors, but by August, 1936, it had decreased to 1,800 students under 26 classroom and 96 shop instructors. Boys between the ages of twelve and sixteen years are enrolled, and at eighteen or nineteen years of age they are graduated and offered jobs in the Ford Motor Company.

Class work is planned to cover a 4-year period, and the subjects are usually of high school grade. English, mathematics, mechanical drawing, and shop theory are continued throughout the entire period. One week is spent in class work followed by 2 weeks in segregated shop work. Each boy receives 3 weeks vacation during the summer and 1 week at Christmas time, thus providing 14 weeks of classwork, 34 weeks of shopwork, and 4 weeks of vacation annually. During all periods the student receives cash payments at the beginning rate of 15 cents per hour, adjusted eight times each year to a maximum of 60 cents per hour according to achievement. A hot lunch is served free each working day, and an additional $2 per month is given to each boy for a "thrift account" in the bank. In addition to courses which aid them in becoming scientifically trained workmen, students receive instruction in civics and economics in an effort to establish a broader insight into current social and economic problems.

Two other training schemes are maintained by the Ford Motor Company: one, the *Ford Apprentice School;* and the other, the *Ford Training School.* In June, 1935, the Ford Training School was opened for high school graduates between the ages of eighteen and twenty years. Students entering this school are selected from lists recommended by local boards of education. Training continues for 3 months, at the end of which the student is either offered work in some department of the company for which he has demonstrated particular fitness, or is given the opportunity of further training. During this 3-month period each student is paid $22 per week.

From these two trade and training schools and from the various departments of the organization those who have shown unusual ability are given a further opportunity for specialized training in the Ford Apprentice School. Approximately 2,500 are enrolled under the direction of twenty-two full-time instructors. During the first 2 years of this training period, or until the employee has mastered his course, he must attend one class a week in both mechanical drawing and mathematics. Courses in electricity, steam engineering, and metallurgy are offered in addition to apprentice classes to those employees whose work would be benefited by a knowledge of these subjects. All classwork in this school is done either before or after working hours and no extra monetary compensation for it is offered. After each series of seven lessons, an examination is given in which the student must make a mark of 70 if he is to enter the succeeding series of lessons. Under this system the shop instructor acts as keyman, assigning students to their first classes, transferring them from one operation to another in the shop as rapidly as possible, and making progress ratings and recommendations from time to time as achievement warrants. From this group of highly trained men, the company recruits its foremen, specialists, and technicians.[1]

Under the sponsorship of the Federal Committee on Apprenticeship Training, various associations are cooperating in maintaining indentured apprenticeship programs. The Metal Trade Association of Detroit offers several types of indentureships through cooperating members. Under the plan of one such member, the Fisher Body Company, boys of seventeen or over are selected for the apprenticeship course under entrance requirements approved by the Federal Committee on Apprentice Training. This plan calls for 1 full year of tenth grade day trade work at a large vocational high school followed by two years of cooperative training (half shop, half school) after which a high school diploma is given. The program is finished after completion of an additional 2 years of full-time employment with 4 hours of related school work per week, upon a basis of which a standard apprenticeship certificate is issued. All applicants pass through a 3-month probationary period. The starting pay is 38¢ per hour with a 6 months' scheduled increase to 50¢ per hour. After this training program, the rate of pay is determined by ability and achievement.[1]

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[1] *Automotive Industries*, vol. 275, Aug. 29, 1936, pp. 276–278; and *Personnel Journal*, vol. 15, January, 1937, pp. 247–254.

The Burroughs Adding Machine Company, another member of the plan, maintains its own plant school with boys spending 40 hours per week in school and factory combined. The Chevrolet Motor Car Company has a separate apprentice department where boys are trained during a 4-year apprenticeship period under conditions identical to shop work. Boys between the ages of sixteen and eighteen are eligible, and, after a 3-month probationary period, they receive an indenture contract calling for a 4-year training period. During the first 2 years this program occupies 9 hours a day, 5 days per week, supplemented by night school attendance.[2] Compensation is the same as that made by the Fisher Body Company, and, upon receipt of a diploma, a bonus of $200 is given. The Chrysler Corporation also has a similar apprenticeship program. In 1935, the American Foundrymen's Association adopted certain standards for apprenticeship under the National Apprenticeship program of the government.[3]

In 1926, the General Motors Corporation established the General Motors Institute with two main objectives in mind: the development of employees within the organization, and the fundamental training of young men beginning work with the company.[4] Under the educational program of this institution, the spare-time programs of young employees are organized upon a short unit basis with classes meeting 2, 4, or 6 hours a week per term of 12 weeks. More than 200 unit courses are available, most of them being offered after working hours in the evening. There is also offered a cooperative program for the purpose of introducing new employees into the manufacturing and retail fields. A cooperative engineering course extends over a 2-year period, with a provision that in exceptional cases reappointment will be made for 1 or 2 additional years. Students are selected by divisions according to where they are to be trained in shop work, and their work schedules alternate every 4 or 8 weeks between the shop and the institute. Plant jobs are paid for at a definite wage, and entrance ages range between sixteen and thirty-two. Young men entering the "dealer cooperative service program" come from the employ of General Motors dealers throughout the country and are trained to become expert service men and mechanics. Individual progress reports are compiled for each student, both by the institute and by the shop instructors. It is interesting to note that approximately 90 per cent of the graduates of the institute are employed by the General Motors Corporation. By means of this program, the student is given training in the theory and practice of engineering with special reference to the automotive industry, in the hope that the company by these means can develop the executive type of engineer instead of the analytical or designer type. The company believes that there is a real need for men trained in executive work in industrial management but that other training facilities are at present inadequate. Almost all of the major divisions of the corporation enter into the work of the Institute. The Chrysler Institute of Engineering is operated on a somewhat similar basis.

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[1] *American Machinist*, vol. 81, May 5, 1937, pp. 363–364.

[2] *Ibid.*, vol. 80, Apr. 22, 1936, pp. 338–340.

[3] *Automotive Industries*, vol. 75, Sept. 26, 1936, pp. 404–407.

[4] *Iron Age*, vol. 136, July 11, 1935, pp. 35–36.

Under the apprenticeship plan of the General Electric Company (Erie Works),[1] boys with high school education or equivalent between the ages of sixteen and twenty-one are chosen for a training period extending through 7,200 hours of service, 6,400 of which are consumed in shopwork, and 800 in classroom work. A required number of hours of work in mathematics, drafting, electricity, metallurgy, machine design, mechanics, and physics are required, and a regular apprenticeship indenture is entered into. Apprentices are paid during all hours of service, both in shop and classroom, at rates ranging from 32 to 50 cents per hour. Upon the completion of this course, a $100 cash bonus and an apprenticeship pin are given to each graduate along with a certificate of apprenticeship. Permanent records are kept of graduates in and outside the company. In one plant of the corporation, apprenticeship training began in 1902, and since that time over 1,400 workers have been graduated. Many of these are now filling responsible executive and supervisory posts with the organization.

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[1] *American Machinist*, vol. 80, Apr. 8, 1936, pp. 302–304.

Other industrial plans, including those offered by communication, transportation, retail, merchandising, and financial companies are equally important, but since they, as a rule, are briefer and simpler than trade training plans, and bear characteristics quite similar to the plans described here, they need not be reviewed. Inasmuch as training programs for employees of municipal, state, or federal bodies are administered in a manner far different from that found in private industry, their analysis will be reserved until a later chapter devoted to the field of civil service personnel.

Extent of Ordinary Training Programs.—It has already been stated that many large organizations normally conduct some type of employee training work, but that periods of business depression usually cause substantial retrenchment in these programs. Even though statistics relative to the extent of this practice are not obtainable for the nation as a whole, regional surveys do give a fair indication of their popularity. A study of industrial education in the central states discloses that all of the nine companies included, with a total of approximately 60,000 employees, conducted trade apprenticeship training work for at least 2 years during the period 1929–1933.[1] The relative importance of the various programs during these 5 years is shown in Table 12.

TABLE 12.—INDUSTRIAL EDUCATION IN NINE CENTRAL STATE COMPANIES, 1929–1933

Type of program	Number of companies participating	Number enrolled				
		1929	1930	1931	1932	1933
Trade apprenticeship	9	498	448	276	195	179
Executive-foremen	6	774	599	375	402	456
Job or shop	2	200	296	139	331	308
Sales	4	687	554	477	495	412
Technical or operating	4	156	197	98	34	28
Service	4	4,060	4,058	3,557	3,504	3,728
College graduate	5	240	171	112	15	21

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[1] "The Selection and Training of Modern Factory Workers," *University of Minnesota, Bulletin of the Employment Stabilization Research Institute*, April, 1934.

A "Survey of Adult Technical Education in the New York Industrial Area" indicates that, of 248 companies covered in 1934, only 70 offered courses for employees.[1] Instruction here was generally confined to large organizations. For instance, of the twenty-five large public utilities included, nineteen were offering courses. In certain Southern states, standardized programs have been introduced by many of the large textile companies.[2] On the other hand, however, many organizations, such as most of the chain stores throughout the country, too frequently still hire men who receive little or no attention after they are placed.[3] A satisfactory program of training should be developed scientifically and followed systematically; it will vary with the type of employees, size of the organization, and geographical distribution of the operating units.

Retraining Programs.—Along with the training of young and new employees, organizations of all types have recently been confronted with the problem of *retraining* the older ones. This program is at last gaining widespread interest, although many companies are barely beginning to consider the problem as it relates to employee education and training work. A review of present practices shows that retraining policies fall within five major groups:[4]

1. Retraining programs designed to lead to effective transfer of employee instead of layoff.
2. Those designed to develop all-round ability by some form of work rotation.
3. Those designed to keep employees who are closely confined in their work abreast of changes in method and mechanization.
4. Special programs drawn up for the purpose of taking care of employees affected by technological changes.
5. General training courses designed to aid all employees in acquiring a better background. These are usually combined with cultural courses offered.

Problems involved in training new employees and in retraining older ones are in many respects quite similar. Except for differences in types of mentalities and past experience they are almost identical. The causes underlying the need for retraining, however, are far different from those giving rise to programs for training new employees. Regular apprenticeship programs have been followed for many years in American industry. Retraining programs are the product of depression years and technological changes.

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[1] *Michigan Engineering*, vol. 56, April, 1934, pp. 218–220.

[2] *Ibid.*, pp. 221–222.

[3] See Beckman, R. O., "Employee Training in Widespread Organization," *Personnel Journal*, vol. 13, June, 1934, p. 1.

[4] See particularly, Section in Industrial Relations, Princeton University, *Company Retraining Programs*, 1933, p. 22.

There are three major reasons why organizations are now incorporating retraining programs into the broad plans of employee training. First, depression periods bring widespread unemployment, and this in turn causes many efficient and skilled workers to lose their jobs and occupations and take up almost any type of work offered to them. With reemployment, these once-skilled individuals often return to their old trades only to find that much of their skill is lost. Again, many formerly well-trained workers have returned to their old trades, only to find that the encroachment of old age with its physical impairments, weakening morale and interest, and its mental deficiencies has greatly incapacitated them, even to the extent of disqualifying them for retraining along their former lines of employment. This offers the tremendous task of rehabilitation in which the government recently has become actively engaged, but in which private enterprise must cooperate through retraining and replacement programs if it is to be performed successfully.

The third cause for the need of retraining programs is equally persistent in times of recovery and in times of depression. It is the constant force of technological change—the perfection of equipment, the introduction of labor-saving devices, the continuous displacement of men by machines. Wherever such change appears there is created an immediate need for adjustment which can be made most effectively only through the scientific retraining and replacement of workers. This force sometimes diminishes in intensity during depressions because of public disapproval of the introduction of new devices. In any event, however, it is accelerated as prosperity returns, thus adding to the problems of employee education and training by making retraining imperative. A properly functioning personnel department will assume this responsibility along with that of general training.

The Advantages of Training.—Training and retraining programs yield good dividends for all concerned. The employer benefits from the resultant decrease in labor turnover; diminution in the amount of spoilage in materials and damage to machines, tools, and equipment; reduction in the number of accidents and the amount of lost time which normally results from injuries; increase in the efficiency of individual workers and in the plant as a whole; and the cultivation of cordial relations which experience indicates is a common consequence of training opportunities. He also benefits from the fact that training develops managerial talent. Many companies testify that a large proportion of their foremen and other executives have been recruited from the graduates of apprenticeship and other training courses.

Training is of considerable, often immeasurable, value to the employee. It increases his earning capacity by broadening his skill and his knowledge of related processes. It prepares him to seize promotional opportunities which may ultimately lead him into executive positions. A less tangible but no less real benefit is found in the fact that training broadens his mental vision, heightens his self-respect, and enhances other people's esteem of him, both inside and outside the workshop. It increases his economic independence because a well-trained and efficient workman finds it easier to obtain and hold a job than does the unskilled, who is among the first to be laid off in times of slack production.

Whatever helps to stabilize the working force of a nation, to enhance its technical knowledge and dexterity, to conserve its physical and mental power, and to increase its general efficiency invariably tends to reduce the cost of producing commodities and to increase output. These results normally are reflected in lower prices to the consumer. Moreover, by increasing the worker's self-respect and making him more satisfied, training increases the number of desirable and contented citizens.

Fundamentals of a Good Training Program.—If training programs are to achieve the success of which they are capable, there must be adherence to certain fundamental principles. A careful survey of the operation of the plant must be made to ascertain the need or advantage of any improvements designed to facilitate production and increase output. Such a preliminary analysis will uncover not only hitherto undiscovered waste and leakages in processing, but also inefficiencies, lost time, and wasted motion on the part of the human forces. These facts will usually reveal the need for training. A definite, systematic program of training must be formulated to meet the needs of the particular plant. There must be accurate determination and selection of those workers who are most in need of training and those who are most capable of advanced instruction.

Every attempt must be made to provide definite promotional opportunities for all employees who have completed the course of instruction, especially for those who spend from two to four years in learning the industry or business from beginning to end. Responsibility and authority in the administration of the training program must be definitely fixed and allocated. Centralization of supervision in the hands of a competent director of training and education is much to be desired and is in accord with the best practice in American industry. Instructors should be chosen not only for their knowledge and experience in the operation to be taught, but also because of their ability to teach others what they themselves know. They should be thoroughly familiar with organization and methods. Each should possess a commanding personality capable of inspiring confidence and interest. Training must be on a par with other activities, which means that attention to its needs will not be incidental but considered of primary importance, the same as production. An appropriate and adequate system of records must be kept. Only in this way can the cost and results of training be accurately ascertained and data accumulated which will facilitate future readjustments and improvements. Selection and placement must be conducted upon a strictly scientific basis. Definite standards of achievement must be formulated and provisions made for rigid scrutiny of accomplishments. This means that periodically the objectives, principles, and procedure shall be carefully examined to test results. Finally, the program of training must be properly coordinated with the other activities of the organization. This will call for the closest cooperation between the training, production or operations, and employment departments.

Social Responsibility for Employee Training.—Active public interest in the problems of vocational education and industrial training is manifestly on the increase in the United States. Cooperation in the program of education is a responsibility which society cannot avoid, because the problem of training is, in the final analysis, a social one. The Federal Board for Vocational Education puts the matter frankly thus:

> Society as a whole has to pay the bill for labor inefficiency. Half-trained or poorly trained workers in any field increase production costs, which in turn are passed on to the consumer. Clearly the public, laborers as well as others, have an interest in securing an adequate supply of well-trained workers for every line of necessary work.[1]

The conviction is growing among our people that preparation for citizenship is not the only legitimate function of an educational system, unless there is a redefinition of the phrase "preparation for citizenship" to include equipment for effective entrance into employment and the economic activities which the average youth in a democratic society must face. Local, state, and federal governments are assuming a large measure of responsibility for providing adequate facilities, leadership, and supervision for apprentice education. Vocational training is a fundamental need of a democratic society, and the need becomes more urgent and general as our economic organization becomes more complex and our population increases. "The need must be met if we are to continue industrially efficient, and if the welfare and best interests of society are to be promoted."[1] This does not mean that society can or should attempt to take over the excellent work which is being done by corporations or that it should take the initiative in establishing apprenticeship schools. Rather does it mean that our educational program shall be so organized as to facilitate cooperation with industries, labor organizations, and other agencies in providing such training for all who desire it. It is quite obvious to nonpartisan observers that society cannot afford to delegate the whole program of training to employers and trade unions, since neither of these parties can be expected to formulate a program that will accord in every particular with the purposes, plans, and ideals of a democratic community.

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[1] "Apprentice Education," *United States Printing Office, Bulletin* 87, June 1923, p. 60.

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[1] *Ibid.*

CHAPTER XXII

THE TRAINING OF EXECUTIVES

Executive Training.—No personnel department can function successfully in building sound relations between employers and employees until supervisors and other executives become fully conscious of the importance of their strategic positions—until they become human-relations conscious. Executives are the keymen in industrial organization; they are the sources of contact between capital and labor. Their chief responsibility is to bridge the gap between those who own or control productive enterprise and those who are producing goods or services.

When American industrial organization was composed of small-scale enterprises, this human-relations problem did not exist. Employer and employees then made up an industrial family. The boss was proprietor and owner, he knew each worker well. When John Smith was absent, the employer knew it immediately and could make inquiry and lend individual aid if such was needed. If Smith was not doing so well in his work, the employer was soon aware of it and was in a position to see whether something was wrong in Smith's home; or whether a lack of instruction, poor supervision, a faulty machine, or something else caused the difficulty. The employer's individual knowledge of his men and the conditions of employment served as the basis for formulating labor and production policies.

Small organizations in which these personal relationships between employer and employee obtain are still numerous. In such cases, there exists no urgent need for the major types of executive training. However, with the development of mass production and large-scale industrial units, the gap between employer and employee has widened greatly. Junior and senior executives—the foreman, departmental head, junior executive and supervisor—in this more complex organization interpret management to the workers, and the workers to the management.

Management, however, is conscious of the heavy responsibility imposed upon the supervisorial and executive ranks of any organization where hundreds of individuals are constantly acting as interpreters and representatives. The president of one large organization says, "A good supervisor is like a booster on a power line; he serves to energize the flow of information from employees to management and the transmission of company policies to the men."[1] According to another executive, a foreman now must not only supervise actual production, maintain quality, and keep costs low, but he must also reach these objectives by the adherence to the principles of scientific management of his men.

This does not mean that the supervisor or foreman must be an expert in performing the score or more duties which F. W. Taylor assigned to a foreman under the old system of management.[2] But it does mean that today, as never before in the history of business organization, there is a need for executives with background, experience, and insight sufficient to enable them to make fair and consistent interpretations of the company to the workers, of the workers to the company, and of both to the public. This is the chief aim of executive training. It may be attained through a fourfold program: (1) provision of information (both general and detailed) to the executive; (2) cultivation of the executive's ability to think; (3) development of his general executive ability; and (4) development of complete appreciation and understanding of the importance and methods of maintaining cooperative relations between the workers, the company, and the public.

The need for executive training will always depend upon the size of the concern, the rapidity of its growth, and the complexity of its operations. In old organizations which have slumped into a somewhat static condition, there is little need for systematic courses of training. Promotion from the ranks can usually be depended upon to fill executive positions. It is quite different with large, rapidly growing enterprises; in these, definite training plans are imperative. Without such a program, younger men of ambition and potential executive ability receive only such incidental instruction as the inclination, time, and opportunities of experienced workers and executives permit. This method of training is wasteful and unsatisfactory and has little excuse for existence in a progressive establishment.

In a real sense, executive training is more urgent than employee training, because executive ability is relatively and absolutely more scarce than ordinary mechanical ability. Moreover, no establishment can depend completely on outside sources for an adequate supply of superior talent. The logical and appropriate place for developing executives is within the organization itself.

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[1] Metropolitan Life Insurance Company, *Training Supervisors and Key-Men.* This study represents the most complete survey of executive training programs yet made, to which the authors are indebted for much helpful material presented in this chapter.

[2] See Chap. III.

Recruitment and Selection of Candidates.—So intimately related are senior and junior executives to the successful administration of industrial relations in modern industry that the solution of personnel problems really begins with a wise choice of those who in the future are to fill positions of an executive character.

As far as possible, candidates for executive training should be recruited from within the organization. As has already been pointed out, technical schools and colleges are becoming an increasingly fruitful source of candidates and tend to furnish a desirable type. Nevertheless, progressive corporations see to it that the men in their own ranks are given an equal opportunity with college graduates to receive advancement to executive positions.

The initial step in insuring an adequate supply of able executives is the definite formulation of a course of training and the careful and systematic selection of the candidates to be prepared for advanced positions. As in the selection of recruits for the ordinary working force, there should be an attempt to balance ability and experience. This means that men of unusual intelligence and attractive personality will not be chosen unless they combine with these a goodly measure of successful attainment in the business or industry and have other qualities which are deemed essential to the efficient execution of administrative work. Among these qualities are character, honesty, self-control, patience, insight, industry, perseverance, a spirit of service, leadership, cooperativeness, and an understanding of human nature. For it must be remembered that the ability to supervise others successfully is a quality distinctly different from technical knowledge and skill; it is also quite different from unusual native intelligence and acquired general knowledge. This partly explains why, in some companies, one finds that 90 per cent of the junior executives have come from the ranks and are not college trained, while in others they are evenly distributed between high school and college students. When men are recruited from within the organization, performance records, rating scales, and personal estimates are used as a basis of selection. Some companies give intelligence and trade tests and competitive examinations. Companies that recruit their future executive material from technical schools, colleges, and universities usually establish relations with these institutions.

Methods of Executive Training.—Methods of training executives may be classified into four general groups. The most widely used method today is that known as the 'conference method," which is based upon the theory that the need for "training to think" is greater than the need for technical training among actual or potential executives and that this training can best be obtained by drawing men together in small conference groups under the leadership of a competent executive for the purpose of thinking about the jobs for which each is responsible. During these regularly scheduled conferences preassigned study topics are discussed, both general and specific information is imparted to the members of the group, and many practical problems and policies of the enterprise are critically analyzed. Since this method so often includes the study of actual problems or "cases," it is sometimes referred to as the "conference-case method" of executive training. When great emphasis in the training program is placed upon analysis of practical cases, it is sometimes known as the "case method" of executive training.[1] In general, however, the conference method includes these variations in emphasis, and the method remains basically the same. Its chief advantages are that the foreman or other supervisor under training is not conscious of "being educated"; it concentrates upon practical rather than theoretical study and is flexible enough to allow for such changes in emphasis as appear desirable while the program is in progress.

A second general method is that known as "formal training." As this term suggests, formal training methods are made up of regularly scheduled lectures, usually given by senior executives of the company, but sometimes by outsiders; classroom discussion hours; or a combination of lectures and discussions. In carrying on this method of training, more formal textual material is used as a basis of the program of study, and less emphasis is devoted to the detailed, practical problems which are currently arising throughout the organization.

A third method is that of "informal training," where no scheduled classes or conferences are arranged, but where executive training is conducted if and as the need arises. The underlying conviction of those who defend this method is that the executive's first task is to assume definite responsibility for himself and his employees and then to undertake such training as circumstances indicate are indispensable. Thus, every contact with an employee affords an educational opportunity. Sometimes more specialized training under this method is gained through personal visits to other organizations where the executive can discuss with other executives the problems peculiar to his own work. At times, the prospective executive is given a systematic course of instruction through the various divisions of his own organization; correspondence school, evening school, or university extension classes; conferences, association meetings, and other group meetings within his own industry or business. The chief characteristics of this type of training are its lack of formality, individuality, flexibility, and imposition of responsibility on the individual for the successful completion of training.

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[1] This type of training was discussed at the Sixth International Congress for Scientific Management, Education and Training section. *Proceedings*, 1935, p. 69–71.

A final method of executive training is that offered under the supervision of the Federal Board for Vocational Education, a body established under the Smith-Hughes Act of 1917, which made available certain federal funds for the promotion of vocational guidance in agriculture, home economics, commerce, and industry. This work as it relates to executive training takes two different forms. Sometimes at the request of a state board of education the federal board offers a training course for foremen conference leaders. This was done in Detroit recently, during which time an agent of the board lectured on the origin, development, and objectives of the conference method, and was then followed by the inauguration of forty-seven practice conferences.[1] The method may include supervisory training classes by members of the staff of a technical school or university. Between 1923 and 1930, for instance, Purdue University carried on foremanship conferences with 400 industrial establishments having 6,112 foremen in 238 different groups.[2] Discussions are carried on in a series of scheduled meetings (usually six meetings to a series) with emphasis upon the foreman's responsibility for training the workers in his department.

Content of Executive Training Courses.—The content of executive training courses varies with the type of business or industry and the particular needs of the company. A wide range of subjects appears, including the fundamental principles of economics, business organization, and operation; the development of modern industrialism; the origin and nature of the industry or business; the history of the company; plant organization, operation, and processing; sales organization, methods, and policies; general administrative organization, personnel administration, and industrial management; and psychology, sociology, commercial geography, mathematics, physics, and metallurgy.

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[1] "Report of a Training Course for Foreman Conference Leaders," *United States Trade and Industrial Bulletin* 164, *Series* 48, June, 1932.

[2] Purdue University, *Engineering Extension Department, Bulletin* 25, 1931, pp. 1–61.

Usually the company's director of education and training outlines the course of study, prepares the text materials, and consults with a committee of executives appointed by the general manager. Every attempt is made to present technical material in a simple, clear, and interesting manner. The teaching staff is chosen for its teaching ability as well as for its technical skill. Outside teachers are sometimes brought in, but officers of the company give occasional lectures and, sometimes, regular instruction. When the principal officers of the organization take an active part in the training program, students are inclined to regard the course of study seriously. Officials also benefit because in order to present their material systematically they are compelled to visualize all the operations for which they are responsible. This tends to sustain alert interest in their duties. Candidates for executive training usually are not given special financial incentives; they find sufficient incentive in the desire to attain a higher executive position, to earn a larger income, and to associate with men of higher rank. The results of executive training courses have more than justified the added expense to the company. An adequate supply of candidates for executive positions has been forthcoming and the general efficiency of the organization has been improved.

Foremanship and the Problems of Personnel Administration.—Used in an inclusive sense, the term "foreman" refers primarily to "an individual, regardless of his title, who represents the lowest link in the chain of authority, supervision, and management; that is, the minor executive who stands next to the working force."[1] From the point of view of successful administration of employment relations, the position of foreman in modern industry is often far more important than that of senior or junior executive. This is true because the foreman is constantly in direct and intimate contact with the employees. The workers look upon him as the official representative of the company, and frequently he is the only representative with whom they ever come in touch. It is natural, therefore, that his words, actions, attitude, and methods should be accepted and interpreted by them as reflecting the established policies and practices of the firm. This may or may not be the case, but the fact that the workers believe it to be so is sufficient to cause misunderstanding.

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[1] *Federal Board for Vocational Education, Bulletin* 60, p. 10.

The position of foreman is no longer being filled by a man of unusual physique, choice variety of vocabulary, and an excessively domineering and self-assertive personality. Such an individual may have had the confidence of the company, but he seldom gained the confidence of the workers. Modern industry is seeking a larger measure of good will and loyalty from its employees, because ultimately it is upon these that efficient production must depend. The advantages resulting from scientific improvement in the organization and operation of mechanical factors; discovery of new methods and processes of manufacture; and improvement in methods of assembling, scheduling, and routing of materials have often been negatived by foremen's unscientific methods of managing men.

In approaching the problem of foremanship in modern industry, two things must be kept in mind, namely, the foreman is not wholly, and sometimes not at all, to blame for the attitude he assumes in the management of the men under him; and every workman is a potential foreman, who, when he chances to rise into a company position, is likely to be impatient with those who have not risen or cannot rise in a similar way. The average foreman is an individual who by force of economic and social circumstances has been rushed from the elementary school, or no school at all, into industry to earn a living as best he could and to learn a trade or a division of an industry without definite guidance and help. At best, his knowledge is likely to be commensurate only with the elements of a trade picked up during 2 to 3 years of apprenticeship, augmented by considerable experience. Seldom does he have any conception of the principles and methods of modern business and the fundamentals of personnel management. No system prepared him for his advanced responsibilities unless he chanced to be in a progressive concern which had an educational and training program. He attained his present position because he was found intelligent, self-reliant, loyal, and industrious. His ascent from the ranks was merited by faithful toil and a willing acceptance of the company's disciplinary regulations.

The old type of foremanship was a burdensome position with exactions far too numerous for constructive and efficient service. The foreman had, first of all, to know the job or trade technically and mechanically. Then, the more aggressive he was, the more likely was he to please the company. He had to be a good driver of men in order to get out his assigned production on scheduled time, and to do this he spared neither himself nor his men. He was assigned numerous other duties, such as hiring and firing workers, determining rates of wages and costs, supervising the installation of new machinery and its upkeep and repair, inspecting finished products, keeping records, breaking in and training new employees, and submitting advice and suggestions for improvement.

With such a variety of duties, it is little wonder that foremanship has failed to meet the requirements of a progressive personnel policy. There is a marked tendency, however, to get away from the old type of foremanship, to adopt a functionalized foremanship, and to build up staff departments which take over many of the foreman's responsibilities, thus releasing his energies for specialization in a restricted field. Often now the maintenance, repair, and alteration of machinery and equipment are in charge of a repair boss or a mechanical department; a regular inspector is charged with the examination for quality; a machine-speed boss keeps production up to the limits set by the speeds indicated on the instruction cards; work is planned and assigned by the planning department; job analysis and occupational rating are in charge of a division of the personnel department; materials are delivered by the store department; the training of new workers is the duty of a supervisor of training and a special training department; and the whole process of hiring and firing is in the hands of the employment office.

Maximum production of superior quality at minimum cost remains the major responsibility of foremanship. The foreman's duties are still complex. He must coordinate the work of his department with other departments; secure the objectives of quality, quantity, economy, and continuity of production; reduce amount of lost time; prevent spoilage; avoid unnecessary repairs; reduce accidents; and enlist the good will and cooperation of the men. To do these things he must know the capacity of his machines and keep them in running order, instruct the men how to use them without undue wear and tear, make cost and production records, and understand the capacity and temperament of his men.

This is no small assignment for the average human, and it necessitates the possession of extraordinary qualities or ordinary qualities in an extraordinary degree. A foreman is expected to have a measure of personal force, character, ideals, sympathy, earnestness, self-control, unselfishness, breadth of mind and vision, a spirit of friendliness, cheerfulness, patience, loyalty, and good health.

Added to these, moreover, are a reasonably general education; mechanical training, which implies not only a sound knowledge of his work but also the ability to perform work efficiently and to know when it is so done; and technical training, which often includes a knowledge of mathematics, tool and machine design, strength of materials, and the basic principles underlying machine construction and operation.

Executives' Personnel Responsibility.—The fundamental difference between successful and unsuccessful organization is to a large extent measurable in terms of difference in the skill, efficiency, team play, and cooperation of the working force. Efficient industry depends upon good management, effective methods and processes, efficient and willing employees, and expert supervision. The executive holds a strategic position. As already suggested, he stands between the actual operating force and the management. To the management, he represents the workers; to the workers, he represents the management. In this double capacity, he must not only give orders, directions, and suggestions to the men, but must take orders and directions from his superiors. From a narrow point of view, his men are only so much labor power to be distributed or assigned to specific operations in the most economical and proficient arrangement. From a broader and more accurate point of view, his men are not impersonal units of knowledge, skill, and energy, but human beings having all the common attributes of their species. As such, they cannot be interpreted in terms of technical operations and cost elements. Consequently, the foreman's job takes on a different aspect, requiring him to be not only an expert in the technique of production, but an expert in handling divers personalities.

Functionally, then, the executive is charged with the responsibility of possessing a knowledge of the minimum skill, intelligence, experience, and proficiency required for each particular task; and of assuming the duty of obtaining the desired attitude, reaction, and cooperativeness from the men and women under his supervision. To his technical function is thus added his human-control function, which is essentially psychological in nature. On the human side of his job, he is charged with the difficult responsibility of maintaining the morale of his working force. A responsive state of mind is indispensable to efficient production. His immediate and direct contact with the employees means that of all members of the executive staff the foreman is in the most strategic position to stimulate and sustain morale, provided he is cognizant of his responsibility and seizes his opportunity. His peculiar tasks here are development of interest in the work, promotion of satisfaction with jobs, and conservation of human forces.

Creation of interest and satisfaction and the conservation of human forces will require a spirit of courtesy, patience, and watchfulness. In the performance of these duties, the executive is an important link in the whole chain of human administration. It is up to him to discover cases of physical and mental fatigue, illness, undesirable personal habits; susceptibility to personal injury, habitual carelessness; and indifference with regard to dangerous operations. All of these directly affect efficiency and output. Frequently, also, he must give first aid in accident or illness.

Planning an Executive-training Program.—In outlining the steps in planning an effective program, it is important to bear in mind the two distinctly different types of individuals to be trained. In the one are those who come from another line of business and must be taught the fundamentals of the new organization. Every effort must be made to enable these men to assimilate the company's policies and aims, to impart to them a clear conception of the problems of various departments, especially of the department in which each is to work, and to give them as much general experience as is compatible with efficiency.

Those making up the second group are executives already in service who must be taught to cooperate with their fellow supervisors in other divisions of the organization, and to coordinate the work of their own departments with that of all other divisions. Problems arising in their daily routine and the responsibilities and functions of other departments are generally considered in classes arranged for this group. For both groups, the contents of the program must be gleaned from all parts of the organization before the program becomes an effective one.

Such a task involves several basic steps in the process of its development. It must start with selling the management the idea of such a training program in order to assure adequate financial support for an effective training organization over a long enough period to produce results. With the basis for the program established, its development will involve the following steps:[1]

1. Determining the problems of supervisors with relation to management by job analysis, preferably by the supervisors themselves in order to insure their later interest and support.
2. Determining the problems of management with relation to supervisors and executives.

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[1] Metropolitan Life Insurance Company, *op cit.*, p. 19.

3. Bringing together into a systematic course the ideas and material obtained.
4. Choosing a leader or educational director, keeping in mind the fact that the success of a program rests largely with the person immediately responsible for the educational work.
5. Helping the leader to develop himself by putting him in touch with sources of information and facilities for conference leader training.
6. Checking the course periodically to revise it in the light of current needs.
7. Developing a method of measuring the results of the program.

At least four things are essential for a successful program. First, management's active and continuous interest must be won. Second, the program must be kept under competent leadership if interest is to be maintained and results are to be gained. Third, the groups of members entering the training program must be carefully selected and must be kept down in size to where intimacy is at all times insured. Finally, if the plan is to have real value to the men and to the company, practical subjects must form the center of study. When these principles are religiously followed, an executive training program should have no difficulty in proving its own worth to all interested parties.

Training Plans of Individual Organizations.—Generally speaking, executive training courses may be grouped into three divisions: informational and inspirational courses, the aim of which is primarily to disseminate certain lines of information and to stimulate interest in the job; organization courses, designed chiefly for the purpose of teaching foremen to organize, classify, and clarify the knowledge which is already theirs by virtue of many years experience; and problem courses, the purpose of which is to examine critically the difficult problems of human supervision which the foreman faces in the daily routine of his duties. In the past, a considerable number of courses have been informational and inspirational, but there is now a definite tendency toward problem courses. Because the nature and content of training courses vary according to the requirements of each individual organization, a brief review of several plans should prove instructive in indicating how executive training is carried on and what it accomplishes.

1. *Crompton and Knowles Loom Works.*—This company schedules weekly conferences between the general manager, superintendents, and all foremen. These conferences are frank informal gatherings which serve to establish close contact between management and executives and to give advice and confidence to supervisors. When requested or necessary, foremen-instruction courses are provided in such fields as accounting, economics, production costs, labor turnover, overhead, and machine efficiency. As a means of

accurate rating and checking of a foreman, management reports are required from time to time showing his function in the management of the business and presenting a record of activities and accomplishments. These records are compared periodically with the financial quotas assigned or prorated to each executive for purposes of operation analyses. In these ways, foremen are thoroughly trained in the intricacies and problems of management. Promotions depend upon the results of these evaluations of work.

2. *Commonwealth Edison Company.*—In this company, a "president's" training course was established in 1927 under the direction of the superintendent of training. The course is given to almost all staff members who can qualify for executive-training work. Its purpose is to "give this group of supervisory employees fundamental information regarding the management problems met in this business, and methods of their solution." The program is divided into three parts. The first deals with problems of production, public relations, government regulation, valuation and rate making, finances, service, and fundamental problems of public utility ownership and management. The second part of the program deals with management problems and their effective solutions. The third part is interpretative, and evaluates the work of the organization in terms of principles developed previously. Approximately thirty executives are enrolled in each class conducted by superintendents and training staff members. Meetings are held once each week (1½ hours) for thirty-seven weeks during which time thirty-seven topics are studied and discussed. The material used is compiled by various branches of the organization and is revised each year. This training program has revealed the executive problems of the company and has helped to focus attention upon the weak spots within the organization.

3. *International Business Machines Corporation.*—This company's program combines lectures, conferences, and text study, and is conducted entirely by the director of education and his staff. It is offered only to supervisors and foremen; some seventy men participated during 1934. Part one of the course deals with the factory and the field and is designed to give factory supervisors "a picture of the applications of products in the field and the responsibility of supervisors in the performance of products *after* they have been shipped from the factory." Part two develops the duties of a supervisor and aims to impress upon this group the fact that they deal with "six highly important elements: men, machines, management, minutes, money, and materials." Part

three is built around the subject of waste prevention and aims principally "to consider the origin and causes of waste and to indicate to the supervisors the ways and means by which it may be controlled or prevented." The main items of waste considered are labor, materials, and supplies; machinery and equipment; accidents and illness; space; light, heat, and power. The course ends with a careful consideration of the prevention of waste through the study of cost sheets.

4. *General Motors Corporation.*—Executive training is paramount to the close cooperation and smooth coordination of the world-wide organization of General Motors Corporation. Three objectives serve as a basis of the company's executive training program:[1]

> *a.* The development of a foreman (or other junior executive) on the job is the primary responsibility of the executive to whom he reports.
>
> *b.* An executive who takes a training attitude in his work accomplishes much of this development through his day-to-day contacts on the job.
>
> *c.* Certain phases of needed training, however, can be done more effectively by organized methods, provided they are closely coordinated with the day-to-day functions of the organization.

To this end there is created a "master session" or committee made up of the general manager and key officials of the corporation whose responsibility it is to outline carefully the material and subject matter which is to be studied and reviewed. Week by week, this master session decides upon the current operating problems which are to be discussed and the methods of handling them. Executive training is conducted in the form of regularly scheduled conferences, at which time carefully prepared problems are systematically presented for intensive study. Thus the conference discussions deal with the application of fundamental principles of management to everyday problems of the organization. This results in a common understanding and point of view throughout the corporation. Both conference manuals and textual material needed in the carrying on of this program are prepared in full cooperation with the General Motors Institute. Usually the conference leaders are either trained or furnished by the Institute. During the fiscal year 1934–1935, the major subject for discussion at these conferences centered around employer-employee relations. Approximately 7,250 men participated in conference programs.

5. *Eastman Kodak Company.*—After a thorough study of existing supervisory training programs, which included visits to com-

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[1] Metropolitan Life Insurance Company, *op. cit.*, pp. 35–36.

panies maintaining conference programs, the Eastman Kodak Company recently decided to inaugurate a systematic plan of executive training. The main objective of the program is to "develop a more effective control of operations by creating throughout the organization a uniform interpretation of management's attitude toward the problems arising in getting work done, and where possible through the establishment of improved methods of carrying on the work."[1] Thus the plan aimed to make the supervisors and other employees more efficient in their present positions. The experience of this company is significant, because the problem dealt with was not so much one of training people for new executive positions as it was one of training the old supervisors and foremen to the point where they would be of greatest possible effectiveness in performing their regular duties.

To this end, each plant of the organization, through its respective departments, is made responsible for carrying on the training work. The first step entailed the creation of an advisory or "steering" committee composed of ten executive heads of the home office, whose duty it is to arrange for leader groups, departmental training meetings, subject matter to be covered, and other items relating to the general conduct of the program. The supervisors in each department are then divided up into groups of ten to fifteen each, and each one of these groups meets every week for not more than two hours under a member of one of the leader groups. The subjects of study covered include an analysis of the job to be done, the technique of management and supervision, and necessary requirements for making supervision effective. The real success of this program is demonstrated by the results experienced during the past year or two. Under this plan, supervisors have less difficulty in carrying out their work schedules; cooperation and understanding have been promoted by means of regular conferences of executives; dissatisfactions among employees due to unintentional lack of uniformity of interpretation and application of company policy can be quickly traced and remedied; and a clear definition of the management's attitudes is developed.

Public Aid for Instructor-training Courses.—There are two general methods of financing and operating instructor-training courses, namely, at public cost and under public control and at private expense and under private control. The provisions of national and state vocational education acts make it possible for instructor-training courses to be conducted by the local public school authorities, in cooperation with and under the direction of the state board for vocational education, which is entrusted with power to administer the state plan. Such a scheme involves no expense whatsoever to the foreman or the firm. It can be applied in or out of the plant and either on company time or the time of the learner. The only qualification is that wherever public funds are expended for the operation of such a course or for the payment of instructors' salaries, control must rest in the hands of the public school authorities. A high degree of cooperation between the industries and the school officials is possible in such matters as selection of instructors and content of the course, but determination of policies lies in the hands of local or state educational authorities, as the case may be.[1]

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[1] Gates, A. B., "A New Technique in Executive Training," *The Society for the Advancement of Management Journal*, vol. 1, January, 1936, p. 9.

If this plan does not meet the need for executive training, any industrial plant or group of plants may introduce instructor-training courses entirely at their own expense and under their own control Even under these circumstances, it is possible to obtain advice from public educational authorities. Practically every state board for vocational education has on its staff an official who is responsible for the training of trade and industrial teachers in the state and who is constantly aiding industrial plants in the installation and operation of instructor-training courses.

Where courses are offered wholly by the organization, the chief items of expense are the costs incurred in the preparation of the course of study, the salaries or wages paid to lecturers or conference leaders, and the time lost by supervisors in attending class on company time. During one year, the latter item accounted for a loss of 250,000 man-hours to the General Motors Corporation, yet the company felt it was time very well spent. The real cost of all training programs, in the final analysis, is determined by the difference between the money spent and the value of improved morale and efficiency. The cheapest training course can become the most expensive if it fails to meet the needs or is unsuited to the conditions under which it is made to operate. Again, its true cost may be ridiculously low, if it accomplishes its purpose.

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[1] *Federal Board for Vocational Education*, "Instructor Training," *Bulletin* 62, June, 1921, pp. 8, 9.

CHAPTER XXIII

THE EMPLOYEE MAGAZINE

The Development of the Employee Magazine.—Of all agencies designed to create interest in the job and organization and to promote efficiency, cooperation, and good will, the employee magazine is often regarded as the most effective. This is probably due to the fact that no other medium of communication between management and men is likely to be so universal in its appeal and results. The employees' publication is a necessary development in the creation of a common bond among individuals who, because of the vastness of the organization of which they are a part, are likely to experience only impersonal relationship.

The employee magazine is now emerging from its fourth stage of development in the United States. The first magazines were published primarily for the benefit of customers. As early as 1847, the *Mechanic* was published by the Smith Machine Company for customers of the company, and, in 1878, the *Fall River Line Journal* was circulated among the patrons of a coastwise steamship line. In 1890, a second stage was entered when the National Cash Register Company published a 12-page monthly magazine called *Factory News* for the company's employees.

Some years later, the World War and a growing interest in the principles of scientific management contributed to the third stage of employee magazine development. This development was characterized by a phenomenal increase in the number of publications issued for the benefit of the workers. A survey in 1921 revealed that no less than 334 company magazines were being published throughout the nation, 91 per cent of which had been initiated during the period from 1917 to 1920. Four years later, this number had increased to 428.[1] For the next 7 years this wave of popularity continued. The great depression ushered in the fourth stage which was marked by a phenomenal decrease in the number of employee magazines, largely because of the need for economy. A study of over 415 magazines shows that 208 had been discontinued by the end of 1932.[1] Suspension during this period was most severe within the merchandizing and manufacturing groups, and least noticeable among insurance companies, public utilities, railroads, and mining companies. Economic recovery, however, brought with it an increase in the number of employee publications.

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[1] National Industrial Conference Board, *Employee Magazines in the United States*, 1925, p. 1.

Industrial journalism as represented in employee magazines is perhaps the most personal of all forms of journalistic endeavor. In some ways, it exceeds even the small-town weekly in its intimacy. Like the American newspaper, the employee magazine seeks to reflect the life of those whom it represents and to express the intimacies of its own environment. As the enterprise grows and matures, there is great need for a definite and regular agency which will weave into a single thread the scattered skeins of the daily routine and the varied activities of the working force; some agency that will penetrate deep into the lives, habits, and thoughts of each individual in the industrial family and surround the day's work with a stream of humor, suggestion, and helpfulness.

Some Preliminary Inquiries.—Judging from past experience, the life of an employee magazine is very precarious. The high mortality rate of such publications is in no small measure attributable to the fact that they were launched with little or no groundwork. Before management can intelligently determine whether or not a company magazine should be launched there are several pertinent questions to be answered; otherwise, a premature demise is almost inevitable. Is there a definite and real need for such a publication? Are there already in existence any other agencies which will meet the need successfully? What are the objectives which management wishes such a publication to achieve? Is the management able and willing to give the magazine the support necessary to assure success? Can the services of a well-qualified person be obtained to edit the publication? Will the returns from such a venture prove an adequate compensation for the necessary financial outlay?

Fundamental Purposes of Publication.—For many years, house organs have been published by manufacturing and business concerns and mailed to regular customers and prospective buyers. In addition to the regular advertising matter, such publications have sometimes carried accounts of the industry, largely historical and descriptive in character, and photographs of the company's officers, together with their personal records in the service of the organization. The fundamental purpose of these house organs is to cultivate the good will of customers and to increase the number of buyers of the company's goods or services. Their function is essentially advertising. They are intended primarily for customers and only secondarily for employees. In more recent years, plant magazines have been introduced primarily for circulation among employees. Some large companies publish both an external and an internal house organ. The principal difference between the house organ and the employees' magazine is that the former is intended to sell goods or services while the latter is designed to sell an idea, namely, interest in the job and the company. The number of such publications has increased rapidly, despite a high mortality rate. The good will of customers and of employees is an asset the value of which cannot be measured in terms of dollars and cents and is fundamental to the success of any establishment.

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[1] "Employee Magazines in the Depression," *Management Review*, vol. 22, May, 1933, p. 149.

An experienced and successful editor of an employees' magazine states its function thus:

> . . . the real purpose of an internal house organ is to sell the job to the worker. Properly conducted and edited, a plant paper will improve the efficiency of the worker, reduce the number of accidents, improve health, secure suggestions, induce the foreign born to become citizens, explain company policies, speed up production, and in general bring about a better understanding between the front office and the man in overalls.[1]

To another writer, the employees' magazine "is made to serve as a means of extending personality, establishing an acquaintance between the Big Boss and the employee, and providing a medium of communication not only for messages but for friendly interest and consideration."[2] In an issue of its employees magazine, a large railway company states that the purposes of its publication are "To develop company spirit among our employees and to develop pride in their work; to interest and entertain our employees; and not to attempt to uplift or preach." These conceptions of the purposes of employees' magazines suggest that each company has its own peculiar motives in introducing its plant paper.

After careful examination of a large number of plant publications we find that their functions and uses cover a wide range. All of them, however, appear to have certain fundamental purposes in common. These are:

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[1] BOTSFORD, HARRY, "Why Plant Publications Fail," *Printing Art*, vol. 41, May, 1923, p. 262.

[2] SMITH, J. EVANS, "The Editor's Place in the Management," *Management and Administration*, vol. 6, December, 1923, p. 750.

Promotion of acquaintanceship and better human understanding.

Development of interest in the job and the company.

Stimulation of efficiency and increase of production.

Cultivation of intimacy and friendliness between the company and its employees and among the employees themselves.

Promotion of mutual interest and cooperation.

Attraction of good workmen to the plant.

Dissemination of accurate information with regard to company policies.

Focusing of employees' attention on industrial-relations program.

Announcement of changes in general policies.

Education of employees in the right use of their leisure time.

Education of employees in the nature of raw materials, machinery, equipment, and processes.

Giving of helpful lessons to employees or their families in matters pertaining to home ownership, life insurance, thrift, investments, and home operation.

Spreading the gospel of health, sanitation, and safety.

Extension of the use of English and reduction of illiteracy.

Teaching of good citizenship and preparation of men for naturalization.

Promotion of understanding among employees of different nationalities.

Quieting unfounded rumors and checking radical tendencies.

Encouraging interest in recreation and play.

Broadening the general mental horizon of the workers.

Promotion of community of interest and stimulation of group unity and solidarity.

Breaking departmental isolation and bringing men closer together.

Correcting community abuses.

Contents.—The contents and arrangement of employees' magazines vary greatly with the needs and purposes of the companies, but greater uniformity is being developed as editors exchange experiences. The value of the magazine depends upon the degree to which its contents reflect the life of the plant. The following observation of an American journalist concerning the value of a newspaper is applicable to an employees' magazine.

> . . . its value rests not merely upon what it contains, but upon the relation which that value bears to the society of which it is a part. It serves that society and is served by it. The instant it is detached from that society, it ceases to live. Its life is large in the exact proportion as its contact and interpenetration of the social structure is complete.[1]

In order to create in each employee an interest in the company and an earnest desire for its success, every employee magazine must reflect the intimate experiences and interpret the activities incident to the daily life of the organization. It should be so interesting that the appearance of each issue will be anticipated with eagerness by both employees and officials. The primary concern of the company should be whether the plant paper is actually read by employees and whether they look upon it as their own medium of expression or as a mouthpiece for company propaganda. A paper which is read with interest may become the most important single factor in the cultivation of loyalty and in successful execution of the company's program.

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[1] WILLIAMS, TALCOTT, *The Newspaperman*, p. 24.

Educational items have a large place in the most successful employee papers. Articles describing the educational activities of the company and showing the relation of these to self-improvement, increased efficiency, and larger income have proved both interesting and helpful and have done much to stimulate interest in the company's educational program. Health and safety campaigns, which are essentially educational in character, have frequently owed their success to the excellent presentation of facts through the columns of the plant magazine. It is now generally conceded that fully 75 per cent of all industrial accidents and illness are due to causes which can be eliminated only by education of individual employees. Articles describing the effect of accidents and diseases upon the worker's life and usefulness and upon the welfare of his wife and children have had a remarkable influence upon accident prevention and hygienic living. Such articles urge the use of first-aid equipment, and explain how safety equipment can be used.

Stories dealing with technical phases of the industry have great educational value and react favorably upon efficiency. Many plant magazines run a series of articles describing the extraction and nature of raw materials, analyzing the manufacturing processes of various departments of the plant, and explaining the distribution and ultimate use of the finished product. Some publications reprint from technical journals a summary or review of articles dealing with materials and processing. Citations of these are given so that those who wish may read the whole of the original articles. Many employees have no knowledge of what the finished product really looks like or how it is used, and they are often equally ignorant of the relation of their own particular jobs to the whole plant. Through the plant paper they are shown the results of their work and the significance of the things they are doing.

Of major importance in the contents of a company magazine are personal items and stories about members of the industrial family, which have a particularly interesting human appeal. When asked by an enterprising reporter what people are most interested in, the late Lord Northcliffe unhesitatingly retorted, "Themselves."

His wide experience in newspaper publishing had taught him that the individual likes to see his name in the paper. This human weakness is capitalized by every successful plant magazine. Thus, items about vacation experiences, transfers and promotions, accidents and sickness, births of children, engagements, weddings, deaths, and guests have great interest value. Stories relating heroic acts of certain employees during fires, storms, or wrecks have a direct appeal. A more extended phase of personal items is the series of *Who's Who in the Plant* articles, which are brief biographies of individuals from the president down to the janitor. Stories of individuals who have made valuable suggestions for technical improvements, reduction of accidents, or extraordinary sales are of interest.

Shop news affecting groups, such as the employees' club and the mutual welfare association, appeals to the majority of workers, as do also accounts of social and athletic activities. The progress of departmental teams or the plant team in bowling, baseball, handball, or tennis is watched with eagerness by large numbers of workers, even though the majority do not participate in any form of athletics.

Advice, suggestion, and service columns create interest in the plant publication. Home economics hints interest the wives, as do also suggestions with regard to life insurance, home ownership, investments, health, and fitness. Announcements of all kinds help to arouse the family's interest in plant affairs. Informative columns which not only present interesting bits of information on general subjects but also carry answers to questions submitted by employees and their families are a welcome addition.

Illustrations and cartoons brighten the paper and are understood even by those who cannot read much English. Photographs of children of employees and of workers who have been in the service of the company for a long period are always interesting. Pictures showing the effect of accidents and the use of safeguards often appear. Illustrations of special pieces of work turned out by various departments or individuals are frequently used, in conjunction with short explanatory articles telling something of interest relating to their use.

Special announcements of changes in company policies governing conditions, hours, wages, absenteeism, and discipline, when accompanied by explanatory articles which present the reasons for these changes, are extremely valuable in preventing discontent and promoting understanding in industrial relations.

Clean humor and jokes have a place in the company magazine. This is especially true when an attempt is made to gather the humorous incidents that occur daily to employees of the plant. Humorous rhymes and even sensible poetry are desirable, particularly when they are written by talented members of the organization.

Editorials are a significant factor in the plant magazine, provided they are timely and well written. To be effective they should be brief, earnest, simply phrased, informative, inspiring, and free from the suspicion of subtle propaganda. Editorials which are nothing more than preachments are resented and frequently prevent the development of a successful paper.

The purpose of the employees' magazine is not primarily educational or moral, but psychological. It is essentially a matter of creating interest. Educational matter and editorials must be subordinated to the items which appeal to the largest number of workers. It is now generally agreed that two-thirds of the magazine should deal with personal items, athletics, social gatherings, and departmental or group activities which have a distinctly human appeal.

The Editor: His Job and Qualifications.—The contents and success of a company magazine depend upon the ability and qualifications of the editor. Editorship is a direct responsibility of management, but it has not always been earnestly assumed. The failure of a large percentage of internal house organs can be attributed to absence of proficient editorship. Men are often chosen for this important position without regard to their ability and experience. The job is a big one. The truly proficient industrial editor views the company magazine as the greatest single agency for coordinating the activities of the departments; presenting the company's policies intelligently; stimulating ideals among executives and rank and file; promoting sound thinking and loyalty; improving the general morale; and furthering the interests of education, safety, health, sanitation, and recreation.

Too frequently newspaper reporters, magazine writers, and publicity "wizards" have been employed as editors, but, because of their inability to conceive the peculiar problems of industrial journalism, they have failed miserably. The editor of an employees' magazine should be experienced in industrial journalism, know what is good news, and have ability to express his ideas clearly and simply. Success depends, too, upon the personal qualities of originality, a balanced sense of humor, sincerity, congeniality, and the power of organization and leadership. An appreciation and understanding of the problems of the industry and establishment are imperative. The editor must be able to analyze his organization, grasp the fundamentals of every department of the business, and write about these technical operations in an intelligent manner.

The editor must write editorials that are timely, suggestive, and interpretative; they must deal with things of interest to the workers and never degenerate to the negative level of denouncing employees for their ideas and activities. Many companies require that the editor shall know how to purchase printing, art work, and engraving and have a working knowledge of what constitutes good typography.

Organization, Make-up, Distribution, and Control.—The organization of the plant paper will depend upon the ideas of the editor, but it is generally agreed that wherever and whenever possible the employees themselves should be the principal contributors. Their cooperative interest and activity is essential to success. It has proved wise to organize a contest for the choice of a name for the paper, the selection being entrusted to a committee consisting of representatives of management and employees. The name should be appropriate, expressing the essential nature of the plant, some recognized phase of the company's activities, or its trademark. It should be dignified, well chosen, and easily pronounced. *Wireco Life* of the American Steel and Wire Company, *The Mixer* of the Joliet Works of the Illinois Steel Company, *The Wingfoot Clan* of the Goodyear Tire and Rubber Company, and *The Inside Track* of the Market Street Railway of San Francisco, the *57 News* of the H. J. Heinz Company, *Long Lines* of the American Telephone and Telegraph Company, *The Milky Way* of the Borden Farm Products Company, *Tick Talk* of the Western Clock Company, *The Edison Round Table* of the Commonwealth Edison Company, *Trumbull Cheer* of the Trumbull Electric Manufacturing Company illustrate appropriate choices of names. Interest in the paper is best stimulated by the election or appointment of departmental editors and reporters, who gather news of the departments and individual activities and aid the editor in chief in putting out a well-balanced paper. Each department of the organization should be assigned the responsibility of providing news for its own column in each issue. Sufficiently talented artists and cartoonists are to be found in almost every plant. About nine-tenths of the contents should come from employees. Usually only the editor in chief is paid a salary.

The make-up of the plant paper will depend upon the purpose and the financial outlay. Style, size, and frequency are fundamental considerations. Generally speaking, there are two types of publications: the magazine type, which is more or less elaborate and expensive, and consequently appears only once a month; and the newspaper type, which is less expensive and is usually issued weekly or biweekly. Magazines such as those published by the Santa Fe Railway are costly in their make-up, having excellent paper, an artistic cover, and 50 to 125 pages. Less pretentious magazines, as the *Bulletin* of the Colorado Fuel and Iron Company, the *Cooperator* of the Studebaker Company, or *Progress Parade* of the Associated Oil Company, have a more modest make-up, run from 16 to 32 pages, and are issued monthly. Many concerns cling to the monthly magazine because it permits more attractive make-up, such as high-grade paper, fine screen cuts, and beautiful illustrations, printing, and cover page.

Although it is important, beautiful make-up does not assure wide reading. The comparative circulation of daily newspapers and magazines would indicate that readability depends only incidentally on make-up and format. The newspaper type of employees' publication presents many advantages. Considerations of economy, as well as the principles of effective publicity, make this type preferable. Newspapers can be published more frequently, can be printed and distributed quickly and easily, cost only about 2 cents a copy to publish, are more timely, and tend to appeal to the man in the shop as more democratic than the magazine with its fine paper, expensive cuts, and costly cover page.

The size of the publication will depend upon local circumstances. Some are blanket sheets, others are small enough to put in one's pocket handily, still others are large and impressive but not convenient. Since there are about 25 sizes that will cut, print, and fold with little or no waste, considerable variety of choice is possible. Experience indicates that 6 by 9 or 5 by 8 are good models. In addition to considerations of economy, both the paper and the size of the page must be adjusted to the requirements of good half-tone printing and the proper selection of different sizes of type for various features.

The frequency of issue will depend upon the needs and purposes of the company. There is a leaning toward the monthly publication, but more frequent issues also present distinct advantages. Regularity of issue is essential. Magazines printed as the spirit and generosity of the management move are foredoomed to failure. Irregular publications give the impression of slipshodness and lack of sincerity, and employees soon lose all interest in them.

The cost of publication will, of course, vary with the type of magazine or newspaper and with the cost of printing. The quality of paper, the number of illustrations and pictures, and the kind of cover page will affect price greatly. The cost of a 12-page paper, about 7 by 10 inches, published once a month, and having a reasonable number of cuts and half tones will not be far from $1,000 a year for an edition to meet the needs of 1,500 employees, the price varying according to make-up. Where the plant has its own printing department, the cost is somewhat reduced. Some companies devote much attention to the cover page. This is admittedly a rather important detail, since an attractive cover invites a reading of the interior. The cover page should have variety but retain enough of the design to give individuality and identification.

The matter of distribution has claimed considerable attention. Usually the company bears the full expense of publication, and in this event the paper is distributed free among employees. It may be published jointly by management and employees or by employees alone, and a slight charge made. There is much to be said in favor of charging the workers for their copies of the plant publication. People have a tendency not to appreciate the things they get for nothing. On the other hand, it is difficult to get employees to subscribe for a plant publication. In most instances, distribution is made in the various departments of the plant, or the paper is handed to employees at the gate as they leave work. It is important that the distribution take place at the close of the day's work, otherwise valuable time will be lost in reading the paper and discussing it during the working period.

Some magazines state that the publication is for and by employees of the company. Unfortunately, subtitles and fine-sounding sentences do not always reveal the true situation with regard to control. In one case, for instance, 68 per cent of the space was devoted to direct company propaganda, even though it was claimed that "this paper is conducted by employees for employees; and the company disclaims any responsibility for its contents." The greater the measure of employee control and direction, the greater will tend to be the success of the plant paper. This is almost axiomatic and is rooted in the experience of American industrial journalism. Experienced editors are agreed that the responsibility of the company should end when it has provided financial support for the publication and selected a competent editor to whom is entrusted the job of producing regularly a good magazine or newspaper. A wise editor will gather around him competent leaders who will represent the workers in guiding the destinies of the plant publication. In this way, both management and men are ably represented, and there is little danger that the paper will degenerate into a propaganda sheet either for the employer or the workers. It will then be what it is intended to be, namely, an agency for developing plant unity and spirit. Joint control is always better than control solely by the company or the workers.

Accomplishments of the Employee Magazine.—Unaided by a sincere desire and constructive efforts to correct the existing ills of industry and the particular evils that exist in the organization of which it is a part, the plant paper can accomplish nothing in the way of improving industrial relationships; but functioning in conjunction with a reasonable scale of wages, decent hours of labor, and safe conditions of employment, it can do much. It may not convert revolutionaries into loyal and cooperative workers but, wisely governed and directed, it encourages good workmanship, aids in the reduction of accidents, improves health, increases production, develops pride in the company, promotes morality and thrift, and cultivates plant unity and cooperation. The testimony of successful editors supports this conclusion. One reports, for instance, that the employee publication is the easiest, most certain, and least expensive way of selling the company to its employees. "It generates loyalty, kindles and maintains enthusiasm, reflects the hopes and ambitions of the officers, inspires salesmen, describes policies understandingly, and, greatest of all virtues, provides a sure method of causing individual and concerted action by indirect suggestion."[1]

Why Plant Magazines Fail.—As was previously suggested, there is a high mortality rate among employee magazines. After a thorough investigation, one editor some years ago concluded that nine out of ten fail to achieve their purpose. At that time, it was estimated that over $4,000,000 a year was being invested in plant publications that have a mortality of 30 per cent. This meant a direct loss of $1,200,000 which industry shared.[2]

Why do plant papers fail? Many fail because of incompetent editorship, editors being selected without regard to ability or fitness. Many professional journalists regard such positions as a step downward or as ad interim positions. Thus, they bring little vitalizing energy and enthusiasm to the job and their indifference is reflected in the paper they turn out.

[1] SABERSON, R. E., quoted in *Printing Art*, vol. 41, May, 1923, p. 282.

[2] BOTSFORD, HARRY, *op. cit.*, p. 262.

Faulty supervision is a significant factor in the failure of large numbers of magazines. It is a moot question as to who should be responsible for supervision of employee publications. An examination of several hundred company magazines and papers indicated that the allocation of supervisory responsibility was so varied that over 76 different departments figured in the job. The most prominent departments in charge of the paper at the various plants included the advertising department, the general office manager, and the personnel department. In the remainder of the establishments, it was under the direction of various other departments or individuals ranging from the works superintendent to the bandmaster.[1] There is every reason to believe that the employees' magazine should be edited or supervised by the industrial relations department, since the tendency is to centralize all personnel activities in this department.

Lack of financial support has figured in many failures, the companies being unwilling to invest adequate funds to assure even a reasonable measure of success. A large proportion of internal house organs fail because of their make-up and contents. The deficiencies here include the use of six-point type, which is too small to make reading easy, an excessive quantity of material clipped from other papers, a "high-brow" make-up which does not appeal to the man in the shop, and an overdose of dreary preachments in editorials.

Excessive use of plant papers as media of company propaganda is a responsible factor in the high rate of mortality among them. When the editorial policy consciously seeks to divert the attention of the workers from such vital matters as wages, hours, and conditions of employment by misstatement and misrepresentation of facts, the plant paper degenerates into a propaganda sheet. It is stupid to ascribe every protest of the workers to outside agitators and bolshevistic influence emanating from Moscow, in the face of a wage scale which does not afford a decent standard of living, a standard of hours which compels a man to work 12 hours a day and 72 hours a week, and physical conditions of employment which endanger his health and life. As one writer puts it, "People who write for our working people need to keep their shirts on, so to speak. According to some of these propagandists one would think our country is fairly overrun with Bolshevism and anarchism and that the workingman is being led to an abyss."[2] Employees react unfavorably to a dictatorial attitude reflected through the plant organ. Both propaganda and dictation often emanate from a fearful editor's mistaken interpretation of the management's policy.

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[1] *Ibid.*, p. 264.

[2] HUNGER, E. A., in J. H. Van Deventer's *More Work per Man*, p. 240.

Excessive press-agenting of the "big chiefs" is sometimes a cause of failure. Men in the shop lose faith in an internal house organ that is constantly praising the "big guns." Too many articles and pictures presenting the achievements of executives and founders or too much news from the general office does not get a warm response from the men in the factory. The man in overalls often harbors a naïve contempt for the white-collared inhabitants of the general office.

Finally, discriminatory treatment of departments is a sure step to failure. Once the managing editor shows particular friendliness and partisanship for news items from certain departments, discord is inevitable and failure is not far ahead.

CHAPTER XXIV

SAFEGUARDING THE WORKER'S HEALTH

The Human Machine in Industry.—Vast sums of money are spent annually in the improvement of old machines and processes and in the discovery of new ways and means of making industrial organization mechanically more efficient. Only recently, however, has management become actively interested in conserving human forces and in protecting the health and promoting the safety of workers. It has been appropriately observed: "We know more about hygiene and sanitation than did our forefathers; but of the best methods of getting the most out of our biological machinery we still know far too little. And this is especially striking when we put our machines into factories."[1] This is true despite the fact that the human machine is the oldest in industry and is fundamentally the same in organic structure and function as it was when modern capitalism first substituted the factory for the home as the center of industrial activity.

The reason for this indifference to the needs of the human machine is not difficult to discover. Employers have been so busy perfecting the organization and direction of mechanical factors, in order to speed up production and compete successfully in open markets, that the less obvious efficiency factors have attracted little or no attention. But here, as in so many other phases of human administration in business, a new discovery has been made. It has been found that the human machine is capable of an almost infinite variety of work; is subject to fatigue under excessive strain; increases in productivity when properly conserved; is greatly influenced by such environmental factors as air, heat, humidity, and light; is often needlessly wasteful of energy and time; is capable of indeterminable psychic reactions; and exists in almost as many different types and capacities as there are human individuals.

The Peculiar Nature of Illness.—There are four basic necessities of life, without any one of which individuals cannot for long keep up the productive activities that most people have to maintain in order to live. These are food, clothing, shelter, and medical care. Only in recent years has the item of medical care been added to the list; yet it is fundamental to efficiency and happiness, and to life itself. If the bread earner of the family is stricken ill—whether through an occupational disease, a communicable disease, or through some ailment or accident peculiar only to himself—his status as a wage earner is in immediate jeopardy. Nor has he much choice in the matter, once he suffers from a disabling illness or accident. His demand for medical care is inelastic; he cannot choose between this service and some of the other goods or services offered upon the market, and he cannot often shop around to obtain the lowest price for the product he is about to demand. In cases of emergency illness, and often otherwise, none but the best of medical facilities will do at any price, for he must regain his health as quickly as possible in order to take up again his role as a wage earner.

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[1] LEE, F. S., "The Physiologist in Industry," *New York Industrial Bulletin*, vol. 3, October, 1923, p. 10.

Numerous investigations demonstrate conclusively that preventive industrial medicine is imperative. The facts indicate that a disabling illness usually means a loss in wages or income. A nationwide study completed in 1932[1] showed that during a normal year approximately 40 per cent of the nation's population lost time from work through illness. The gainfully occupied person spends on the average 2.2 work days per year confined to his bed. Many more days are often lost each year because of disabling illnesses which are not serious enough to be bed-confining. This study showed that of those suffering from disabling illnesses 11 per cent lost 5 days or less from work during the year, 9 per cent lost 6 to 11 days each, 12 per cent lost 12 to 24 days each, and 7 per cent lost 25 days or more. On the average, 4 employees out of each 100 lose 25 work days or more annually because of some type of illness.

Payment of Wages during Illness Periods.—What should be the policy of the company relative to paying full wages or salaries to the workers who are thus stricken? Many factors will help to determine this policy, chief of which will be the method of wage payments (whether paid by the hour, piece rate, salary, etc.), the duration of the illness period, and the general personnel policies of the individual company. But in general, no matter how liberal the organization's policy may be, the individual employee's income is bound to be reduced.

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[1] Committee on the Cost of Medical Care, particularly *Publication no.* 26, p. 81.

It is much easier to state what the present policy is in this regard than to try to suggest what it should be. In a survey of the practice followed by employers relative to the payment of California workers during illness periods, it was discovered that among 251 representative firms employing 140,972 workers only 45 per cent of the employees received payment of any kind during absence due to illnesses.[1] In other words, only 45 out of every 100 employees received any pay whatever during illness periods, and, in most of these cases, the payments were only a fraction of normal earnings.

Another phase of the problem of illness which causes it to be so burdensome is that of double financial loss. When the wage earner himself is disabled, he not only loses earnings but, in addition, incurs medical bills for doctor, hospital, nurse, or drugs. The average person spends approximately $2 per month for medical care; the average family spends about $79 per year. This makes up about 4 per cent of the average family budget, in itself not an overburdensome amount to spend for a basic necessity of life. But these expenditures are unpredictable, and they fall very unevenly upon the population. In fact, one family in every 200, on the average, among the working populace actually incurs charges over a year which are approximately equal to the family's entire income for that period.[2] Thus, in these unfortunate cases, the employee's loss is a dual loss—his wages are greatly cut or vanish altogether, and, at the same time, he involuntarily incurs heavy expenditures for care unless these services are obtained free of charge. Even though it is a member of his family who is ill, rather than himself, still his loss is great for he has medical bills to pay, and often the worry and uncertainty of illness cause absenteeism or decrease his earnings because of his own decreased efficiency.

Meeting This Loss through Insurance Schemes.—In practically every civilized nation of the world, except the United States, the problem of safeguarding the worker's health and protecting him against heavy financial losses during illness periods has been met by an extensive system of compulsory or voluntary sickness insurance. Most of these foreign systems provide for payroll contributions by both employer and employee into a sickness insurance fund. During illness periods, the worker, and usually the dependent members of his family, secure medical care without further cost, or with very small additional cost, from doctors and hospitals of their own choosing. In most countries, also, workers stricken ill receive certain cash benefits which serve as partial indemnification for losses in wages due to absence during a part of the period of incapacitation. Through the application of the insurance principle, most workers in other nations of the world are cared for, even though inadequately. Nevertheless, such schemes do afford some means of protecting the worker during difficult times. Thus, the burden of health and income during a period of disability does not rest upon employers, charity, state institutions, or similar agencies.

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[1] California Medical Association, *California Medical-Economic Survey, Final Report*, Appendix F, November, 1937, p. 168.

[2] California Medical Association, *op. cit.*, p. 49.

Reasons for the Slow Development of Health Insurance in the United States.—There are various reasons why this development has been so long delayed in the United States, chief of which have been the unfortunate early experience of workers in companies maintaining rather inflexible industrial health programs, the American theory of noninterference, and the organized and continued opposition of members of the medical profession through the American Medical Association and similar bodies in the various states. There is, however, increasing opposition to a system which permits these conditions of insecurity to perplex the workers. In the course of the next few years, it is very likely that the problems of the worker's health and income will be lessened through health insurance legislation, just as workmen's compensation, unemployment compensation, and old-age benefits have lessened other aspects of economic insecurity during the past few years. Until that time, however, the employer, through the medical division of the personnel department, will have to care for the majority of the workers.

Specific Occupational Hazards to Health.—While sickness and death are not always the direct result of employment, it is nevertheless true that occupation is a primary factor in morbidity and mortality rates.[1] The cigar, foundry, and garment industries have shown particularly high rates from respiratory diseases. Cigar making and garment manufacturing, along with glass and pottery manufacturing and post office employment have experienced significantly high rates for diseases of the digestive system. In glass blowing, foundry work, postal employment, gas manufacturing, and certain types of close office work, diseases and defects of the eyes are common. Diseases of the circulatory system are common among steel workers and among employees where work involves heavy physical duties or excessively great changes in temperature. Ear diseases have been found to be most prevalent among cement, foundry, and glass workers. Among certain other groups of employees, the morbidity rates of nose and throat diseases and venereal diseases tend to be high. Communicable diseases, while not distinctly occupational in nature, are often spread from one worker to another while on duty in the office or at the machine. Then, too, the introduction of new processes and the development of new products are constantly taking heavy toll of health and life. Some occupations are extrahazardous; others, of course, present no serious danger to life and health. No matter what the cause of illness or accident, if preventive measures are not practiced, great loss will be inflicted upon the worker and his family, and additional confusion and interruption will result in lower efficiency. It is the latter result which usually prompts the larger employers to make provision for some type of industrial health service.

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[1] SYDENSTRICKER, EDGAR, *Health and Environment*, p. 137.

Aims of Industrial Medicine.—Industrial medicine does not usually aim to displace other forms of medical practice, but rather to supplement them. However, as long as there remains a general absence of adequate medical care for millions of workers and their families at reasonable rates, there is every reason to believe that the scope of industrial medicine will continue to develop until some widespread form of health insurance is established. The present basic objectives of industrial medicine have been summarized[1] as follows: Ascertaining by means of examinations the fitness of employees for work; maintaining and improving the health and efficiency of those already at work; carrying on of educational work in accident prevention and personal hygiene; and reducing lost time due to absenteeism caused by accident and illness. In general, it has not been the purpose of industry to practice medicine, but rather to conduct physical examinations, care for industrial injuries and diseases, administer first aid for nonindustrial injuries only while the worker is on duty, and to eliminate health hazards. But industrial medicine need not be, in fact is not, always limited to these activities, as may be seen from a brief examination of certain plans applied in various types of organizations.

Typical Medical Service Programs.—During the past three years some employers have encouraged their workers to join voluntary health insurance schemes sponsored by the local or county medical society. Under this plan individuals or employers contract, through the professional associations, with physicians of their own choice to perform necessary services at a specified budgeted amount each month. This plan has operated in Los Angeles County, Calif., where the Los Angeles County Medical Association entered into contract with the Metropolitan Water District to render health services to all employees in the construction gangs of the Colorado River Aqueduct for $1.50 per month each. Funds are paid into the County Medical Association treasury which makes disbursements to individual doctors who perform the services. Benefits are, however, quite limited in scope.[1]

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[1] NEWQUIST, M. N., *National Safety News*, vol. 32, September, 1935, p. 34.

Another type of medical service is offered by hospitals and similar agencies directly to working people or others who are interested. This type usually falls outside the jurisdiction of the personnel office, and it has not yet become an important factor in safeguarding the worker's health. A third method is that of employee subscription to medical services through mutual benefit societies and fraternal organizations. The German Hospital of Los Angeles, for instance, affords complete medical care at $1 per month to all subscribers, except for obstetrics for which no rate is provided. This plan also falls outside the function of the personnel department; the employer has no part in this service, since contracts are entered into directly between the subscriber (who may or may not be gainfully employed) and his fraternal society.[2] Sometimes contracts for medical care are made between employees and a private insurance company or a medical group, an activity with which the employer has no direct connection. Several medical agencies of this type have experienced phenomenal growth during the past few years by making it possible for wage-earning groups to insure against medical costs through small monthly payments.

The principal method by which a company can safeguard and promote health among its working force is through the organization of an industrial medical department. Preventive work of these departments centers around safety and health educational programs by means of contests, lectures, and the employee magazine; physical entrance examinations and periodic physical examinations; medical care for employees while at work, or even after working hours; and, in some instances, providing medical services for employees' families.

In general, these company plans follow one of several specific types. The most important of these is found in those companies which maintain a rather complete medical service, including hospitals and a medical staff or regular medical department. In the case of the Southern Pacific Railway Company, a complete medical department is operated, affording services to employees of the company and, under certain conditions, to dependent members of their families. To this end, an elaborate medical staff and modern hospital are maintained forming the company hospital association. Most of the major railroads of the nation maintain rather extensive medical facilities. Usually, the employee contributions for these services range from $1 to $3 per month, depending upon the income of the employee, although in some cases a flat rate is charged. Practice varies as to the company's contribution. Some railroads contribute a flat amount monthly, others only make up hospital deficits, and still others have no financial relationship to the hospital association, which operates independently of the company.[1]

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[1] Dodd, Paul A., and E. F. Penrose, *Economic Aspects of Medical Practice and Public Health in California* (the unpublished full report of the California Medical-Economic Survey), p. 55.

[2] *Ibid.*, p. 56.

A second company type of industrial plan is found in organizations which provide medical services under certain limited circumstances, although they do not maintain a complete medical department. Examples of this are the health services afforded employees of the Pacific Electric Railway Company, Shell Oil Company, Standard Oil Company of California, and numerous others, including many large department stores, insurance companies, banks, and office organizations. Under this type of plan, the employer may do one of two things: First, he may become a party to a contract between his employees and a health insurance association, a local county medical association, or a hospital association. Such an agreement usually provides for medical care and hospital facilities upon a monthly payment basis and under specified conditions to the employee and dependent members of his family. Or the employer may provide a physician, sometimes with a staff, and emergency facilities for limited services while the employee is on duty. In the latter case, the employer bears the cost, while in the former case, the employee may voluntarily subscribe to such services.

A third and final general type of plan exists in companies which maintain a full-time nurse or two and either a full- or part-time doctor and dentist. This is by far the most common type of medical service in industry. Among the larger organizations, this may mean a medical or first-aid division with a staff of three or more full-time salaried employees—a doctor, one or two nurses, and sometimes a dentist.

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[1] WILLIAMS, PIERCE, "The Purchase of Medical Care through Periodic Payment," *National Bureau of Economic Research*, no. 20, 1932, p. 204.

The medical department of a large city bank, for example, is staffed by three half-time doctors and six full-time nurses who serve 2,500 employees.[1] This department is interested only in developing the best working conditions in the bank from a health viewpoint and does not aim to displace the service rendered patients by their personal physicians. The work is largely that of education, diagnosis, and prevention. Physical examinations are given, and all cases of poor health are carefully followed up to see that proper treatment is being received. After a thorough examination, the company dentist helps employees in making necessary arrangements for treatment under a private doctor or dentist at reduced rates. Contracts are maintained affording free tuberculin, X-ray, and similar examinations to employees, but facilities for this type of work are not maintained by the bank. The medical department's diagnostic and preventive practices have been instrumental in preventing much serious illness, thus materially reducing absences caused by sickness.

In the smaller companies, a full-time nurse is generally maintained during working hours; and either a doctor or dentist, or both, is subject to call at any time during the day, in many instances, keeping regular office hours during certain parts of each day. A modification of this scheme is sometimes followed by small enterprises in which part-day medical service or visiting-nurse service is contracted for by the employer through an outside privately owned industrial clinic or medical group service organization.[2] In the Wm. Hengerer Company department store of Buffalo, a nurse is in attendance at the dispensary during certain hours of the day and then visits the homes of employees who are reported ill; while in the Halle Bros. Company department store of Cleveland, a health service department, headed by a physician, nurse, dentist, and dental hygienist, offers first aid to both employees and customers, treatment of employees for minor ailments, and diagnostic and consultation service. The latter department also gives physical examinations to new employees and offers an annual physical check up to all employees.[3]

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[1] Industrial Relations Section, Princeton University, *Personnel Programs in Banks*, pp. 45–46.

[2] *Harvard Business Review*, vol. 14, July, 1936, pp. 450–459.

[3] Industrial Relations Section, Princeton University, *Personnel Programs in Department Stores.* 1935, pp. 57–58.

Protective Work of Industrial Medical Departments.—Industrial medicine has been defined as "the theory and practice of medicine applied for the purpose of preventing and alleviating sickness and injury among industrial workers in order that they may enjoy the benefits of continuous productive employment."[1] This definition emphasizes the fact that the greatest value of medical work lies in keeping the worker well rather than in curing his disabilities. In the private practice of medicine, the physician thrives financially on the sickness of his patients; his economic prosperity is in direct proportion to their physical misfortune. In industry, the greatest economic advantage accrues to the employer and the greatest prestige to the physician not from curing disabilities but from preventing them. This is in accord with the progressive principle of medical science which urges that people should pay to keep well rather than pay to be cured of ailments that can be prevented.

Medical service is introduced into industry because the employer believes it will prove advantageous. The enactment of workmen's compensation laws imposed a heavy burden of expense upon employers by making them financially responsible for injuries to their employees. The provision of medical and surgical treatment for injured workers and the prevention of accidents immediately became necessary. Early attention to trivial injuries and the education of workers in methods of accident and sickness prevention were reflected in lower compensation costs and reduction of lost time. Moreover, it was soon discovered that there was a causal relation between the working environment and the rate of sickness and accident. Because maximum output at a minimum cost is a cardinal principle of good management, whatever tends to improve the quality and increase the quantity of output is welcomed by the employer; conversely, whatever fails to facilitate output or tends positively to reduce it is tolerated only so long as it is unavoidable. Sickness, fatigue, and injuries diminish output and enhance costs because of their adverse effect upon attendance, skill, contentment, turnover, and compensation awards. Proper health supervision, therefore, pays and pays well, so that economic considerations join with humanitarian impulses in stimulating the growth of industrial medicine.

In many organizations in which medical departments have developed, some very significant steps are being taken to safeguard the workers' health through preventive practice. The respiratory diseases are among the most common causes of disability. In fact, many companies have found it profitable to treat common colds and other respiratory diseases in company solariums. Others are giving catarrhal and cold vaccines to employees in an attempt to prevent colds from developing. Nose and throat irritations are watched, and tonsillectomies are often either given or arranged for privately. Chest clinics held regularly detect the incipient stages of tuberculosis, and employees are sometimes sent to camps or sanatoriums for cure. Special precautionary steps are being taken to check the development of diseases common among women employees. Sometimes, this takes the form of health education, the aim of which is to develop health consciousness and methods of sanitation. Employee magazines are often used as a means to present health diets; advice concerning exercise, relaxation, rest, and sleep; and safety and accident prevention. Questions relating to ventilation, sanitation, illumination, and locker room and lavatory facilities also serve as important phases of the preventive program maintained by the personnel division through its medical organization.

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[1] SELBY, C. D., "Studies of the Medical and Surgical Care of Industrial Workers," *United States Public Health Service, Bulletin* 99, p. 5.

Industrial Fatigue.—The human machine is a finely adjusted piece of mechanism, sensitive to excessive strain and undue exposure to deleterious conditions. There are fairly well-defined limits beyond which men and women cannot go in the expenditure of their energy without suffering fatigue. Like the inanimate machines they operate in the factory, human beings wear out and break down; but in the case of the physiological machine, repair and reconditioning are more difficult and expensive.

Fatigue is viewed as a threefold development: an overt manifestation in the form of reduced output, a physiological state involving certain functional changes, and a feeling of tiredness and boredom.[1] It has been defined as the "diminution of working capacity, often accompanied by feelings of weariness, caused in the human organism by the length or intensity of some activity."[2] The term "industrial fatigue" refers to diminution in vitality and productivity caused by prolonged and intense activity in some occupation or job. Physiologically speaking, fatigue means the failure of the structures of the body to perform properly their normal functions on account of certain physical and chemical changes that have taken place within those structures. This interruption of normal functioning is caused by the accumulation of poisonous wastes in the organism which prevent the creation of sufficient energy to maintain the usual pace of activity. Under such circumstances, proper coordination of the mind and the body is impossible. But when a proper balance is maintained between activity and rest, the intake of energy equals the outgo, and replacement and repair tend to balance depreciation and waste in the organism. So long as the equilibrium between work and rest is maintained, health is normally assured; but just as soon as the balance is destroyed, poisonous substances accumulate, and tiredness, exhaustion, and indifference set in, with the resultant effect upon output.

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[1] VITELES, M. S., *Journal of Industrial Hygiene and Toxicology*, vol. 18, September, 1936, pp. 417–431. See particularly page 417.

[2] FLORENCE, P. S., *Economics of Fatigue and Unrest*, p. 302.

Manifestations and Consequences of Fatigue.—Fatigue may be looked upon as a safety valve that guards the human machine against serious injury. It is a warning against approaching physiological danger, a signal that the human machine is being operated at too great speed, for too prolonged periods, or under conditions which are detrimental to its vital parts. Fatigue is normally manifested by certain characteristic feelings such as tiredness, a disinclination to continue work, a spirit of indifference and carelessness, and a feeling of irritability and boredom. When fatigue sets in, the worker is not necessarily aware of pain or tiredness, but its objective effects are seen in slowing up of pace and disorderly, inaccurate work. The true index of fatigue, therefore, is not its subjective recognition through a feeling of discomfort but its objective effect revealed through lowered efficiency. To reduced physical capacity reflected in decreased output, there is normally added an obvious loss of power of resistance against disease and a failure to overcome the deleterious results of an undesirable working environment. Conscious or unconscious slackening of effort is inevitable.

Experiments in the psychological laboratory of New York University have proved that the use of fatigued muscles of the human body results in waste up to 80 per cent of normal capacity, and that quality of work done under fatiguing conditions is three times as variable as that done by unfatigued muscles.[1] Since fatigue in industry is primarily nervous tiredness referred directly through sensation to the muscles, it is not strange that there results a conspicuous lack of coordination between the mind and muscular activity and a diminution in power of concentration. This condition is frequently expressed objectively through an increase in trifling or serious accidents occasioned by momentary lack of attention to the details of the job. Such accidents may not only mean damage to machinery and spoiled work, but may result in serious temporary or permanent injury to the worker, impairment of his economic efficiency, or his reduction to a position of economic dependence. Even if accident does not result, the feeling of lethargy and indifference which accompanies fatigue usually increases the amount of absenteeism. Paradoxical as it may seem, the fatigued worker generally craves change and excitement, and he lays off to find stimulation outside of his regular work, not infrequently in intoxication and other forms of debauch equally injurious to him.

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[1] MANZER, C. W., "Fatigue: How It Affects Muscular Work," *Personnel Journal*, vol. 13, October, 1934, pp. 140–143.

It is evident, then, that the normal by-products of industrial fatigue impose a heavy burden of cost upon the employer. Increased cost of production decreases the ability of the company to compete successfully with other concerns. If sales are thus reduced, the cost per unit of product is increased, which in turn further enhances costs. Extrication from this vicious circle is difficult. Then, too, illness very often means the loss of skilled, experienced, and efficient employees, a consequence which adds to operating costs and diminishes output.

Heavy as is the burden of cost which sickness and fatigue impose upon the employer, it is insignificant compared with the losses sustained by the worker. Not only does the wage earner suffer the pain and physical discomfort that accompany physical and mental disability, but he must usually also bear the brunt of the increased expenses incident to medical attendance and hospital treatment, not to mention reduced income resulting from lost time. Loss of wages to the average industrial worker means the rapid accumulation of debts and often reduction to poverty and charitable relief, with consequent decrease of self-respect.

Nor does society as a whole escape its share of the burden of sickness and fatigue resulting from industrial employment. Through private and public charity and additional taxation for the maintenance of hospitals, infirmaries, and sanitariums, the community at large is forced to bear a part, often a major part, of the financial cost of the physical incapacity of the workers. In fact, society is compelled too frequently to carry a financial burden which logically and legitimately should be a first charge upon industry.

The Major Causes of Fatigue.—The elements of fatigue are both physiological and psychological. Fatigue is not necessarily the nsequence of heavy physical labor; frequently, it is the direct sult of the dulling monotony of routine tasks which stifle the imary impulses of human nature. Being often a manifestation nervous disorder rather than muscular pain and discomfort, tigue has an intimate relation to the whole psychic life of the dividual. It is impossible, of course, to divorce the psychic from e physical self; mind and body are essentially interrelated. kewise, we cannot separate fatigue and illness, the causes of which e more or less identical in character. It has been observed by dustrial physicians that fatigue is a more responsible factor in the omotion and transmission of disease than any other single causal ndition.

Long hours, excessive overtime, and Sunday and holiday labor, ich preclude opportunity for rest and leisure, are definitely lated to physical disability. The 10-hour day and the continuous ift of 12 or 16 hours at the change of the turn are conducive to e same adverse effects. Cramped and strained positions and stures during work prevent the healthy action of lungs and heart. olonged and excessive muscular strain involved in the handling of avy materials, the manipulation of bulky machinery and equip- ent, and the long standing incident to some jobs are now recognized important contributory factors in rupture and varicose veins. -ventilated, dusty, and noisy places of employment conduce to sease, preclude the maximum expenditure of physical energy, and sult in mental apathy. Efficiency is never achieved in a stagnant d polluted atmosphere, in which fatigue and illness invariably rive. Extremes of temperature are no less deleterious. Physical mfort and maximum output are not possible if the air, even ough fresh, is either too cold or too hot, too humid or too dry.

Ill-kept and unsanitary shops breed illness and fatigue. Unless ecautions are exercised, occupations necessitating employment in e midst of gases and poisons or other irritating substances cause ious illness. Work in compressed or rarefied air and among arp or voluminous dust particles, as at emery wheels and in mines, oduces diseases of the lungs. Eyestrain and acute headaches e often a direct consequence of imperfect lighting facilities and rangement. Malnutrition, caused either by insufficient food or norance of proper diet, is responsible for much illness and fatigue, ewise the lack of proper training in personal hygiene or indiffer- ce to generally known principles of hygienic living.

The timed machine and minute subdivision of labor which aracterize modern enterprise necessitate either the concentration of attention or a varied and wide distribution of attention that invariably produces fatigue. The rhythm and speed of the machine, which Arthur Pound has appropriately named the "Iron Man," compel the adjustment of the operator to it and impose an exacting mental discipline. The almost complete surrender of the worker to the time and rhythm of the machine results in a feeling of strain and fatigue, because the inanimate mechanism is set for constant uniform speed while the human attendant, by the very law of his being, grows tired and wishes to slow up. The worker, it must be remembered, is but a supplement, an appendage to the machine; he becomes its eyes, its legs, its arms, its mind—anything it needs but does not chance to possess. Visualize the deadening monotony of the telephone operator who answers 225 calls an hour, or 3½ calls a minute; the girl in the sewing trades who tends a machine that carries 12 needles and makes 4,000 stitches a minute, or almost 2,000,000 in the working day of 8 hours; the girl in the canning factory who inspects 2 cans of vegetables or fruit per second, 72,000 per day, or places caps on the cans at the rate of 60 to 80 per minute; and the worker in the shoe factory who makes 48,000 eyelets per day. Resulting from this whole deadening routine of repetitious operations is the complete absence of opportunity for creative work and self-expression, a fact which in itself is sufficient to produce fatigue. But there are those who shrink from thinking constructively and who prefer routine jobs where they can develop a high degree of automaticity. This type of work is not fatiguing to all types of workers.[1]

Finally, the sense of economic insecurity which workers experience in so many industries is a contributing cause of illness and fatigue. The unsteadiness of employment in seasonal industries conduces to a feeling of uncertainty and fear that the job will soon end. Only those who have been victims of recurrent seasonal fluctuations and industrial depressions can appreciate the worry that burdens the mind of the average worker. "Excessive muscular fatigue in the sense in which it was formerly used in industry is passing and now we are concerned with the effects of the man's work on his nerves and mental condition."[2]

Remedial Measures.—In the promotion of health and safety among industrial wage earners, four general lines of procedure are possible:

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[1] STEGEMERTEN, G. J., "What Fatigue Does to Output," *Factory Management and Maintenance*, vol. 93, September, 1935, p. 9.

[2] Report of Committee to Industrial Hygiene Section of the American Public Health Association, Oct. 25, 1932.

1. The provision of a satisfactory working environment.
2. Intelligent employment policies and methods.
3. A constructive program of betterment activities.
4. A well-organized and efficient medical and safety service.

A satisfactory working environment includes a safe, healthful place of employment. Machinery, tools, equipment, and processes are safeguarded so that hazards to body and health are reduced to a minimum. Protection is given against communicable diseases. Hours of work are reasonable, and overtime and Sunday labor are cut to the irreducible minimum compatible with economical and efficient operation and the welfare of the worker. Rest periods are as frequent and as well timed as the nature of the operation will allow, so that the worker may be relieved of excessive strain. Sometimes, work is broken by scheduled periods in which complete relaxation is offered, or music is brought in over radio or loud speaker systems to lighten the mental load of monotonous routine.[1]

Intelligent employment policies refer to scientific procedure in recruiting, selecting, and placing employees. Workers are assigned to occupations for which they are physically and mentally qualified and for which their previous training and experience equip them. Special training is provided to prepare them for better jobs and more responsible positions. A system of transfers corrects misplacements, and a definite plan of promotion furnishes incentive and precludes the feeling of injustice which reacts so disastrously upon the mental health of the worker. Finally, a reasonable wage scale is maintained to assure equitable reward for labor and make possible the quantity and quality of food, shelter, and clothing needed for health.

Welfare services and betterment activities include such things as provision of nourishing food at cost or otherwise during the working day; recreational and amusement opportunities, especially where the work is monotonous, concentrating, or exhausting; opportunities for education and advancement; assistance in adjusting social and financial difficulties; and the encouragement of thrift, domesticity, morality and sobriety.

A well-planned medical and safety service includes the organization of a health and safety department which shall be responsible for medical, surgical, and dental services of various kinds, such as medical and dental prophylaxis, first aid, hospital accommodations, and personal hygiene. The importance of the medical department in industry is now generally recognized and accepted by practically all the large employers.

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[1] See, for instance, the *Journal of Industrial Hygiene and Toxicology*, vol. 19, June, 1937, pp 278–279.

The Industrial Physician.—The industrial physician is a man of many duties and must be a man of many parts. He should be a graduate of an accredited medical school and should have had some experience in private practice. Where the pressure of routine dispensary work does not prevent, he is actively engaged in the elimination of unhealthful and unsanitary conditions in the plant and the immediate vicinity. This necessitates tours of inspection, often in company with representatives of the safety, engineering, and architectural departments. He is vitally concerned about sewage and waste disposal, washing and toilet facilities, ventilation, illumination, heating and cooling systems, and similar conditions, inside and outside the plant, which affect the health and safety of the company's employees. Frequent examination of drinking water and the regulation of its temperature are necessary. On the basis of observation and data gathered from employees and foremen, he may offer valuable suggestions to the safety and engineering departments relative to the safeguarding of machinery, equipment, and processes. He is most competent to discover the hazards to health and life resulting from physical defects, monotonous or exhausting operations, dangerous fumes, gases, and dusts.

Through the physical examination the physician becomes familiar with the bodily and mental traits of employees which determine their industrial capacity and limitations. Thus, he can prevent the employment of those who may become an economic liability or may endanger the life and health of their fellow workers. He is able to advise the employment department concerning the placement of employees on the basis of their physical, temperamental, and mental qualifications. Frequent reexaminations enable him to suggest the transfer of workers to jobs less dangerous to their health and to prevent the spread of communicable diseases. In cooperation with the public health service, he can help in eliminating community conditions which spread contagious diseases and increase sickness. For all those in need, he must provide medical, surgical, and dental treatment.

Frequently the physician suggests to the lunchroom management the kind of diet best adapted to the needs and means of the company's employees, and aids in the selection of foods. In this connection, it is his duty to supervise the sanitation of kitchens and watch for the presence of transmissible diseases among food handlers. It is his job to plan and supervise instruction of employees in personal hygiene. Because of the confidence which employees place in him, he is frequently able to discover the causes of industrial discontent, to iron out difficulties in the homes of the workers, and to call the company's attention to cases where legal and financial advice and aid are needed. Not the least of his opportunities is the encouragement of thrift, morality, and self-respect.

Organization and Functions of the Medical Department.—Health service in industry has passed beyond the experimental stage and is now a generally recognized and established phase of enlightened personnel administration. Its achievements have been so commendable that, wherever it has been introduced and supervised in an intelligent manner, the industrial health service has become an integral part of the enterprise. The sources from which medical departments in industry derive their authority vary considerably. Responsibility for the health service is entrusted to the production department, the compensation department, the industrial relations department, or some other official agency, as the office manager, the safety engineer, or the plant engineer. The tendency now seems to be to make the personnel department or industrial relations division responsible for the service.

Standardization of the medical service in industry is neither necessary nor practical, particularly with regard to staff organization. The varying needs and problems of industrial establishments and the progressive character of medical science preclude this. The size of the plant and the nature of the industry are the primary determinants. As was pointed out above, some establishments require only the occasional services of an outside physician; others find it necessary to employ a physician for part-time; still others are compelled to develop a comprehensive medical service. Trained nurses, assistants, clerks, stenographers, and other helpers are found in the personnel of well-organized medical departments. Organizations having definite occupational hazards and those in which there is considerable preventive work to be done, even though the number of employees is small, require a more comprehensive health service than larger establishments in relatively nonhazardous industries. Several small companies, particularly in nonhazardous industries, may cooperate in the employment of a part-time or full-time physician and nurse.

Another factor determining the staff organization is the character of the health service which the company desires. A small staff and meager quarters and equipment will be sufficient if only first treatments and redressings of injuries arising in the course of employment are planned. But, if the company plans to take care of all cases of illness and injury and to extend its health service and supervision to the homes of employees, a larger staff, quarters, and equipment will be necessary. The location of the industry will influence the health service organization and functions. Plants located in or near cities and towns having excellent hospital and medical facilities and skilled physicians need not maintain so comprehensive a health service as those which are isolated.

Wherever possible, all routine clerical work should be assigned to assistants, so that the physicians and nurses may devote their time to technical and professional work. Because of the relation of teeth to health it is a common practice to add a part-time or full-time dentist to the staff. An important consideration in the selection of the health-service personnel is the personality of the physician, nurses, and assistants. Many persons have a dread of relations with a dispensary, and fears and suspicions are most easily dispelled if cheerful, courteous treatment and a spirit of helpfulness are manifested by the health service personnel.

The functions of the medical department in industry will, of course, depend upon the needs and plans of the individual establishment. If the plant employs only a part-time physician, his duties are limited usually to the treatment of cases brought to him, with incidental advice on matters that are called to his attention. Where a full-time physician, assistant physicians, nurses, and clerical assistants are employed and a complete medical department is operated, the duties and activities of the staff are numerous. Generally speaking, the functions of a fairly complete health service in industry include the following:

Physical examination of all applicants for employment.

Reexamination of defective workers at stated or varying intervals.

Reexamination of workmen who are transferred from one department to another.

Advice as to corrective measures for physical defects.

Immediate treatment and first aid in accident cases.

Follow-up treatment and supervision of accident cases.

Physical examinations and advice in cases of sickness.

Prevention of communicable diseases by immediate isolation of cases discovered in the plant, prophylactic inoculations, and cooperation with community health authorities.

Formulation and control of sanitation measures throughout the plant and the immediate vicinity if the company owns the adjoining property.

Operation and supervision of dispensary and hospital facilities and services.

Rest-room supervision.

Prevention of fatigue.

Dental service.
Health education and publicity among employees and their families.
Home service through the cooperation of the physician and nurse.
Home records and reports.

Physical Examinations.—The chief purposes of the physical examination as summarized by the National Safety Council[1] are to aid in the placement of workers, to detect remediable physical defects, to determine the presence of serious organic diseases, to prevent occupational disease by excluding susceptible persons, and to prevent the spread of communicable diseases.

Physical examinations have many advantages for the employer. They make possible the choice of workers who are physically and mentally capable of doing efficiently the available jobs and they prevent the employment of those who are undesirable because of physical defects. Through the initial examination, the physician is able to prevent contagious diseases from entering the factory and becoming established there. Similarly, he is able to discover physical defects of which the person is unaware and, by giving the proper advice with regard to corrective measures, can increase the worker's economic efficiency.

Marked advantages also accrue to the workers. In passing through a complete physical examination, employees are informed of any physical defects which they may have and of which they are not cognizant, and by the advice and aid of the physician are directed to remedial measures. The physical examination precludes assignment of the worker to a job that is beyond his physical capacity, thus safeguarding him from injury and ill-health. The handicapped worker is assured fair treatment because his defects and limitations are determined and his work assignment made accordingly. The physical examination gives every employee the assurance that he is not being unnecessarily exposed to communicable diseases and tends to cultivate the feeling that the company is vitally interested in his welfare.

Proper health supervision presupposes sufficiently frequent reexaminations to ascertain the health status of employees. How often these should be made will depend upon the health of individual employees and the conditions under which they work. Workers who handle dangerous substances should be reexamined at frequent intervals, as should those who do not appear physically strong or who are known to have physical infirmities. A physical examination should be required of those whose output shows an extraordinarily rapid decline. Those who have been absent from work on account of illness or injury should be examined before resuming work. As a matter of mutual protection to employers and employees, those employed in hazardous positions who decide to leave the service of the company should be examined. This will preclude suits for compensation in cases of injuries alleged to have been received while in the service of the company and will give the worker information about the status of his own health. Those who apply for reemployment should be required to pass a physical examination.

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[1] KENNEDY, FOSTER, "Neurological Medicine in Industry," *Personnel Journal*, vol. 15, April, 1937, pp. 360–363.

The defects which frequently cause rejection of applicants are hernia, active tuberculosis, infectious disease, and heart disease. In the final analysis, however, the qualifications needed in the organization determine acceptance or rejection. Sometimes applicants are divided into three classes, namely, those who are physically fit for any kind of work, those who have physical defects but are capable of performing certain kinds of work, and those who are totally unfit for any kind of employment. In the case of the second class, periodical examinations are made to find out if the jobs at which these employees are working are within the limits of their strength. If the requirements of the job are too severe, the employees are reassigned to more suitable employments. Some companies designate certain jobs for physical defectives, who often are very capable workers. Mutes, blind persons, and cripples make up a small proportion in some departments of certain plants. The nature of the industry determines the percentage of such persons that can be employed.

If an applicant is disqualified because of a physical defect, the physician should in a skillful and reassuring but frank manner make him familiar with the difficulty and suggest the best procedure to follow in overcoming it. Physical rehabilitation has often resulted from such friendly action, and gratitude rather than resentment has usually followed tactful handling of such cases. Examination often reveals incipient or active tuberculosis, cancerous conditions, diseases of the digestive tract, latent syphilitic infection, or other destructive organic troubles of which the applicant is totally unaware and which should receive the attention of specialists.

The physical examination varies greatly in completeness with different companies, ranging from only a few general questions to a thorough physical test. Superficiality characterizes the examinations in many cases, the purpose being merely to keep out of the plant those who have obvious defects and who, if employed, may later become a source of accidents. Much of the trouble lies with industrial physicians who in many cases do not give as thorough examinations as are possible and do not follow up cases with intelligent supervision. Sometimes, the company is to blame because it imposes upon the medical department a too heavy burden to permit careful work. The physical examination is the basis of medical work in industry, and, unless great improvement is made, that work is bound to fail. Although such examinations were much opposed by employees when they were first introduced into industry, the opposition has diminished with the realization that they are not an agency for unjust discrimination and that they frequently yield marked benefits. The greatest needs in the extension of this service are for suitable standardized methods, adoption of standard record cards, and an adequate follow-up to insure correction of defects.

First Aid and Follow-up.—Not so long ago, first aid was administered to injured workmen by trained fellow employees. The objection to such procedure is that workers are inclined to regard first aid as sufficient, especially in so-called "trivial" cases, and to neglect to report at the dispensary for follow-up treatments. If the first-aid service is to be effective, it must provide treatment of minor injuries which do not require the services of a physician, and it must fill the gap between the accident and the arrival of a physician or ambulance. Careful records of each treatment should be kept. Present practice usually places the responsibility of first-aid work in the hands of the industrial physician or full-time nurse. There are circumstances, of course, when first aid by a trained worker is necessary. For this reason many companies train groups of employees to apply protective dressing, bind bleeding arteries, administer respiration, and transport injured workmen to dressing rooms or ambulance.

One small room properly equipped should be set aside for the administration of first aid. The plant morale is almost always upset when treatment has to be made public, and the worker should be given privacy. Equipment varies according to the size of the organization and the nature of operations. Isolated forces, such as electric linemen and surveyors, must be equipped for emergency first aid.

If physical examinations given to employees reveal some remediable defects or conditions, it is often the practice to provide the treatment prescribed in particular cases, and patients are called back to the dispensary or hospital regularly for observation and check-up of their condition. Follow-up work of this nature is an essential phase of efficient medical service in industry and will become more general as its advantages are seen.

Health Instruction, Inspection, and Investigation.—Health instruction is frequently given in connection with the physical examination, this being an opportune time for impressing the worker with the wisdom of safeguarding his health. Such instruction is also given through the medium of booklets, special bulletins, posters, and the plant paper. Health and safety bulletins are often distributed among employees, and in some cases special lectures illustrated with stereopticon slides or motion pictures are given. Frequent inspection of the plant is another condition of effective health service in industry. Cooperation with public health authorities in the control of communicable diseases and in protection of water, food, and milk supplies is becoming an increasingly important part of industrial health service.

Investigation of those departments of the organization which appear to be prolific sources of ill health is a responsibility that must rest upon the medical department. As carried out by some companies this takes the interesting form of a daily check up of health conditions in the plant by means of a spot map showing cases of sickness in the different departments. Tacks of different colors are used for the various contagious diseases, and in cases of tonsilitis, grippe, and other acute diseases preventive treatment is given workers closely associated with such cases. The grouping of tacks in the chart often reveals some especially bad condition, such, for instance, as a large number of cases of headache from one department, which is likely to indicate lack of attention to ventilation.

Other Services of the Medical Department.—In addition to the general physician, specialists in diseases of the eye, ear, nose, and throat are employed in some organizations, and recognition of the relation of the teeth to the maintenance of good health has been reflected in some extension of dental service among industrial firms. Full dental service is furnished in some instances; in others only examination and prophylactic treatment are provided, the employee being referred to his own dentist for further care. The work is always done on company time, usually with a moderate charge to cover only the cost of materials. Where fees are charged, the schedule is far below that which obtains in private practice. Occasionally, psychiatrists are employed for the adjustment of cases in which the trouble is apparently mental, and nutrition specialists are employed to cooperate with the medical department.

Some companies provide recreational and rest-cure facilities for run down, enervated, or tubercular employees. Supervised by the company physician, these have done much to expedite recovery in cases of serious organic and functional diseases. Visiting industrial nurses, who call on sick absentees to assist in treatments, give social aid, and offer instruction in personal hygiene, do a constructive work. It is the practice in some industries to give undernourished employees milk twice a day, either free or for a small charge. This is usually done under the direction of the nurse, who takes note of improvement in the health of the individuals.

Equipment.—The success of medical service is dependent upon adequate equipment for effective work. There is marked variation in this particular. The dispensary, which in industry consists of the room or rooms in which employees receive dressings or treatments, is, in some cases, nothing more than an amplified first-aid kit; in others, it is an elaborate institution with the equipment commonly found in hospitals and physicians' offices. In many plants, the dressing rooms are finished in white and kept spotlessly clean, reflecting great credit upon the company and inspiring confidence in the medical service. They are centrally located so as to reduce to a minimum the time required for visits by employees under treatment and to care for injuries with dispatch. In large plants, branch dispensaries are maintained to assure convenience and economize time. In small establishments having no dispensary, there is usually a first-aid room in charge of a nurse or a specialist in first-aid work.

Experience proves that equipment for X-ray work is becoming increasingly necessary in industrial health service, being especially valuable in fractures, in dental work, and in cases where there are foreign bodies in the flesh. The X-ray photograph reassures the employee of the nature and extent of his injury or illness and tends to create confidence in the activities of the medical department. Where X-ray examinations are made solely by outside physicians, the tendency is to send only the most serious cases and to neglect many lesser but potentially serious ones.

Many dispensaries have wards for emergency cases. In some establishments, well-equipped rest rooms adjoin the dispensary and are used by employees who are physically indisposed but not in need of much medical attention. Operating rooms, which are found in a number of large plants, are usually used only for minor operations. After a brief recuperative period, operative patients are removed to the public, private, or company hospital outside the plant. In a few cases, one finds laboratories, sterilizing rooms, special rooms for the treatment of eye, ear, nose, and throat, and other facilities for special examinations and treatment. The general tendency is in the direction of complete equipment.

Health Records and Reports.—If health service in industry is to accomplish the best possible results, it will be necessary to introduce a better system of health records and reports than obtains in most establishments today. This fact is being recognized, and improvements are noticeable. Daily and monthly reports are becoming more common, as also are records of the physical examination, diagnosis, amount of time lost on account of illness or injury, and the nature of the accident or sickness. Data are often added concerning specific treatments administered, the cost of service rendered, the condition of the patient when released, and the compensation award. Such information will make possible intelligent studies of the causes of sickness and accidents and will aid in progressive improvement of the health service.

The Cost of Medical Service in Industry.—The cost of health supervision for industrial workers varies according to the needs and nature of the industry and the generosity of the company in financing the health program. An investigation showed that the average cost of medical service given to 492,579 workers employed in 276 plants throughout the country in 1930 was $5.10 per person. The average spent by companies employing less than 250 persons was $9.95; for those with more than 10,000 employees, it was $4.86.[1] This study showed the average cost was highest among metal-manufacturing industries ($7.44 per employee) and lowest in department stores ($1.11 per person).[2] A study in 1932, covering an average employment record of 2,300 persons in each of 334 companies, showed the average cost for medical service to be $6.30 per year for each worker, or $1.31 per $100 of payroll.[3] The range in cost was from $2.72 per employee in one company to $17.69 per employee in another organization. This accords with other investigations that have been made. The very high cost in some plants results from the fact that the industry is hazardous and extra medical services are needed to safeguard the health of the workers. Mines, mills, and smelters are sometimes located in isolated regions where it is necessary for the company to supply medical service for both the employees and their families. About two-thirds of the cost appears to be taken up by salaries and wages, the balance going to pay for supplies, equipment, and outside medical and hospital service.

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[1] National Industrial Conference Board, *Medical Service*, 1936, p. 84.

[2] *Ibid.*, p. 85.

[3] *National Safety News*, vol. 33, June, 1936, pp. 33–34.

Whatever its cost, medical service is considered by employers to be an excellent investment. The results are not always measurable in dollars and cents, but in most instances the benefits are tangible and real. Many employers testify that such service has increased efficiency, reduced materially the accident frequency and severity rate, diminished absences, cut absentee and labor-turnover rate, and prevented the spread of communicable diseases. Others add that the medical department has paid good dividends through the elimination of occupational diseases, the reduction of venereal disease, and the prevention of useless litigation for compensation. There is no doubt, moreover, that this important undertaking has promoted health education and hygienic living among industrial employees, aided in the better adjustment of the worker to his work, developed a feeling of greater physical security while on the job, created confidence in the management, and done much to improve the general health of the nation.

Conditions of Success.—It is generally conceded that industrial medical service offers a real opportunity for constructive work, provided a conscientious effort is made to make it effective. The conclusion to an extensive investigation of the subject made by the United States Bureau of Labor Statistics suggests succinctly the conditions of effectiveness:

> If the service rendered is that of mere "finger-wrapping," its usefulness is strictly limited; if the opportunity is utilized to study conditions which develop among large groups of people closely associated in their daily work or to learn what are the effects of potentially harmful substances, many of which have not been fully investigated, the service can result not only in a distinct contribution to the well-being of a particular group, but may add also to the sum of scientific knowledge. Whether or not the possibilities of the service are realized, however, depends both upon the qualification of the physicians in charge and upon the degree of encouragement given by the employer.[1]

Industrial medicine, according to the medical director of one large organization, "is not a specialty of medicine, but a specialty in the science of industrial management."[2] If properly organized and supervised, this service can pay a company profits in terms of reduced absenteeism and greater efficiency. In many instances, industrial medicine is still serving the public health needs of the employed persons to a better advantage than private practitioner or public health agency. It often offers the opportunity of budgeting against illness costs. Against these advantages, however, is the common deficiency of inadequate supervision of health plans for individual employees and of plant sanitation. If industrial medicine is to serve most effectively, it must serve individuals, and it must emphasize *prevention* rather than *cure*.

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[1] *Monthly Labor Review*, vol. 24, no. 1, January, 1927, p. 19.

[2] SCHOENLEBER, A., "How Industrial Medicine Aids in Management," *Personnel Journal*, vol. 14, January, 1936, pp. 297–302.

CHAPTER XXV

INDUSTRIAL ACCIDENTS AND THEIR PREVENTION

Need for Safety Measures.—Employers of office forces and of workers in other than manufacturing and extrahazardous industries have little difficulty in providing and maintaining safe working conditions. But, there are thousands of employers who are engaged in enterprises which present real hazards to health and body thus making a safety program for their workers imperative.

A large majority of workers throughout the country are employed in organizations which have neither medical service nor safety organization.[1] In a survey made recently by the United States Public Health Service, covering 615 plants in a typical industrial area employing 28,800 persons, it was found that only 20 per cent were provided with the services of a plant safety director. Some 92 per cent of all industrial workers in the United States are employed in plants with less than 100 employees; over 50 per cent work in plants employing 10 or less workers. Yet among the plants employing less than 100 workers each, only 2 per cent had a safety director, 5 per cent a first-aid room, 1.5 per cent a part-time physician, and 0.2 per cent a full-time nurse.

In contrast to this lack of health and accident service among small organizations, this study found much more encouraging conditions prevailing within the organizations employing more than 100 workers each. Here 30 per cent of the total were found to have a safety director, 54 per cent a first-aid room, 19 per cent a part-time physician, and 32 per cent a full-time nurse.[2] These conditions represent a substantial improvement over those of even a decade ago.

Tardy Recognition of the Problem.—This indicated progress, deficient as it is even in these larger organizations, has developed because of growing realization of the enormous waste and cost involved in industrial accidents and diseases. Although many large, progressive corporations are now devoting considerable time to the solution of this great problem, the general public is still only partially cognizant of the tremendous economic and social burden which industrial accidents impose upon the community. It would seem, therefore, that in this, as in so many other problems of human relations in industry, the greatest hope for improvement lies within industry itself; that here, as elsewhere, enlightened, progressive, and humanized management is the most immediate and effective solution if government intervention is to be avoided. The extent to which this type of management is becoming a reality in modern industry is nowhere better exemplified than in the field of accident prevention.

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[1] United States Department of Labor, *Labor Information Bulletin,* vol. 2, no. 5, May, 1935.

[2] *Ibid.*, p. 6.

The Human Toll of Modern Industry.—The toll which modern industry in America exacts in human life and limb can be measured only imperfectly. Even if statistics were complete, they could never tell the tragic story of human suffering and loss. The voice of sorrow is inaudible and inarticulate except to those whose misfortune it has been to experience the tragedy. Statisticians detached from the realities of industry, employers and their families physically and financially secure, and an indifferent public lulled to sleep in the superficial and thoughtless satisfaction of having its wants regularly filled can hardly be expected to sense the misery and suffering of the wage earner's home into which serious accident or death has come as the price of gainful employment in modern industry. To the individual wage earner, an accident means physical suffering and financial loss. Even when the workmen's compensation law of his state is liberal in its provisions, he receives only a part of his wages. Privation is often his lot and that of his family when an industrial accident destroys his earning power. If the injury is permanent or results in death, his wife and children are compelled to lower their standard of living, and plans for an extended education of the children must usually be abandoned while they turn their attention to procuring the necessities of life during the years when they should be most carefully looked after.

Industrial accident statistics in the United States are inadequate, largely because of a lack of effective machinery for their collection. A great number of accidents occur which are never recorded. What may be accepted as reliable statistical estimates have been made, however, so that one may have some conception of the seriousness of the situation. With the upswing in employment, estimated occupational fatalities rose from 16,500 in 1935 to 18,000 in 1936.[1] In 1935, occupational accidents accounted for 60,000 permanent disabilities and 1,340,000 temporary disabilities. In 1936, these figures rose to 70,000 and 1,460,000 respectively.[1] In so-called "hazardous" industries, such as coal mining, steel milling, and railroading, the human sacrifice is especially great. In 1935, there were 13,622 disabling injuries in iron and steel manufacturing, although this is proportionately only one-tenth of the number in 1913.[2] More than 1,325,000 persons employed in some 28,000 manufacturing plants throughout the country are constantly exposed to the hazards of loss of life or severe injury from dust explosions.[3] In 1932, there occurred 35,575 accidents among American railroad employees, 16,659 of which involved minor compensation adjustment; 1,329 involved major disability payments; and 711 necessitated death compensation awards.[4] In the highly industrial state of Pennsylvania, 1,752 fatal accidents and 142,917 nonfatal accidents occurred during the course of employment in 1930, 1,246 fatal and 129,906 nonfatal accidents were recorded there in 1937, and during no year between these two periods did the number of fatalities fall below 1,000.[5]

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[1] *National Safety News*, vol. 35, March, 1937, p. 34.

The companies which persistently report a high number of injuries per million hours of work are engaged in the logging, sawmill, fertilizer, brick and tile, machine shop, foundry, slaughtering and meat packing, and paper and pulp industries. Those with lowest injury rates are in the automotive, shoe, petroleum, carpet manufacturing, electrical machinery, and supplies industries.[6] High and frequent as many of these rates seem to be, however, occupational deaths were only half as numerous in 1936 as they were at the inauguration of a national industrial safety program in 1913.[7]

Through the years the accumulated losses resulting from industrial casualties, to which the public gives little or no attention, are said to exceed greatly the human cost of wars. This surprising statement serves to bring forcibly before us the staggering price which mankind has paid in human lives for the high development of the industrial system.

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[1] *Ibid.*

[2] *Labor Information Bulletin,* vol. 4, February, 1937, p. 2.

[3] *Ibid.,* vol. 2, August, 1935, p. 8. Also see *Monthly Labor Review,* July, 1937, pp. 195–197.

[4] *Labor Information Bulletin,* vol. 2, October, 1935, p. 10.

[5] From a special bulletin of the Department of Labor and Industry, Commonwealth of Pennsylvania, Jan. 10, 1938.

[6] *Labor Information Bulletin,* vol. 3, November, 1936, pp. 11–12.

[7] *National Safety News,* vol. 35, March, 1937, p. 34.

Nor can Americans find comfort in comparative accident statistics for various countries. Although the United States has developed one of the most remarkable safety movements in the world, the fact still remains that this country has led the civilized world in accident frequency and severity rates. In proportion to population, our rates are more than twice those of any other country in the world. In fact, some 15 years ago (the latest date for which data are obtainable) the combined annual industrial fatalties of England, Germany, and France were less than half of those reported for the United States, although their combined population was greater.[1] Great reductions in these rates have been made within the past 10 years by American industry, but they still remain far above the rates of other important industrial nations, due largely to the speed-up production policies applied in this country.

The Economic and Social Cost of Industrial Accidents.—As already suggested, the human cost of industrial accidents cannot be measured accurately. The same is true concerning the economic and social costs, although, in the case of the economic losses, it is possible to come nearer to an accurate estimate. The most reliable source obtainable estimated that occupational accidents involved a total loss of $610,000,000 in wages, medical expenses, and temporary disability in 1935, and a total of $660,000,000 in 1936.[2] This, it must be noticed, does not include real loss sustained through depreciation in skill, impairment of future earning power because of total permanent disability, or loss of life upon which no price can be placed.

For the employer, industrial accidents mean decreased production, increased overhead, greater labor turnover, increased spoilage and wastage, and direct financial outlay through compensation awards or insurance premiums. The loss of production develops from the temporary absence of slightly injured employees who must spend some time at first-aid stations or the plant dispensary, from the extended absence of the more seriously injured workmen, and the impairment of skill and productive capacity of all employees following the resumption of work. Whether slightly or seriously injured, the worker, actuated by fear of a repetition of the accident, exercises extreme caution and consciously slows up his pace. The whole force tends to slow up upon hearing of an accident. Paralysis of production is likely to follow in the wake of fatalities in mines. Obsessed with fear and no small amount of superstition, the miners often become so disturbed mentally that the balance of the shift is frequently a net loss, many miners knocking off for the day. Those who remain at work are prone to do little else but think and talk of the accident. The same is true, to a greater or less degree, among every working force when disaster strikes.

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[1] PATTERSON, S. H., *Social Aspects of Industry*, p. 241.

[2] *National Safety News*, vol. 35, March, 1937, p. 34.

Overhead charges are increased as a consequence of industrial accidents. Machinery often remains idle while the injured employee goes to the plant dispensary for medical attention. There is decreased production on machines operated by employees who have been injured. Where the accident is serious and a new worker has to be recruited, considerable inefficiency results. The output per machine, therefore, is materially reduced. The percentage of labor turnover is enhanced by industrial accidents, partly because it becomes necessary to replace injured workers and partly because, when the accident rate for the plant is high, employees tend to go elsewhere in search of employment, with the hope that safer conditions will prevail. It is to be expected that increased spoilage and wastage will result from accidents. New employees are likely to spoil materials and injure machinery and equipment during the period of training. Moreover, injured employees who attempt to continue their work frequently spoil materials and damage machinery. The net annual waste due to industrial accidents has been estimated at about $1,000,000,000, not less than $200,000,000 being paid out by employers in the form of workmen's compensation premium payments alone.[1]

The losses incident to industrial accidents are not confined to the worker and the employer. Society in general likewise suffers. Periods of idleness and loss of life mean a great decrease in the productive power of the nation. Skilled and unskilled workers killed or permanently injured cannot be replaced easily, especially if the nation has restricted the immigration of foreign laborers and must depend upon the birth rate for the major portion of its labor supply. In addition to the loss of man power, there are the undesirable consequences of a lowered standard of living among the injured workers' families, the increase of poverty which follows the loss of the main support of the family, and the resultant dependence upon public or private charity. Neither accident nor sickness insurance is adequate to assure the maintenance of the normal standard of living and independence. Finally, prolonged idleness due to injury may breed the habit of idleness and stimulate the desire to live without employment, which in turn breeds moral lassitude.

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[1] *United States Bureau of Labor Statistics*, *Bulletin* 536, 1931, pp. 171–179.

Causes of Industrial Accidents.—The elimination of material and human wastes incident to industrial accidents will depend to a great extent upon the discovery and analysis of their causes. The term "causes" refers to the conditions or circumstances to which accidents are attributable. It is a major responsibility of the safety organization in each plant to isolate these causative factors and apply what seem to be the appropriate corrective measures.

Generally speaking, there are two sets of conditions which produce accidents. First, there are the physical factors or the objective conditions which exist in the working environment. Prime movers and power transmission apparatus figure largely in the causation of accidents. In the absence of safeguards, practically every form of machine and hoisting and conveying apparatus constitutes a constant danger to the worker. The same can be said with regard to explosives, fire, electricity, and hot and corrosive substances. Numerous accidents occur because workers fall into unguarded elevator shafts and excavation pits, stumble over obstructions, or strike against objects and projections in unlighted or poorly lighted passageways. In some industries, the laborer's life is constantly menaced by the collapse of buildings, piles, scaffolds, and other elevations, and, in the case of the miner, the falling roof. Loading and unloading cars, and lifting, rolling, and piling heavy objects frequently cause severe strain. Dust, chips, and flying particles endanger the worker's sight and often permeate and injure his respiratory organs. These and many other conditions result from what may be called "poor housekeeping" in industry and are attributable frequently to an indifferent management.

In the past, greater attention has been given to these physical or objective factors, because they are easily observable and may be ascertained with a fair degree of accuracy. Subjective or personal elements, which constitute the second set of causative factors, have received less attention because they are obscure, difficult to observe, and still more difficult to measure. Physiological and psychological forces are claiming increasing attention, and employers are learning that there is a causal relation between accidents on the one hand, and age, experience, health, temperament, and general mental traits on the other. It is not a facetious observation that establishes a connection between the state of the worker's digestion and accidents. Mental quality has perhaps a more real relationship. Ignorant and unintelligent workers are an accident risk because they frequently do the thing that produces accidents or fail to do the thing that prevents them. It is dangerous to generalize on this point, however, because a worker may be intelligent and enlightened and yet be a chronic accident victim because of a natural disposition to take unnecessary chances or a vain desire to manifest unusual bravery. Carelessness is a big factor in accidents in every plant. Disobedience of safety rules and regulations and the practice of horseplay and skylarking are important causes. Frequently, the worker fails to wear protective clothing or other devices intended to safeguard him. This may be because of forgetfulness or a sheer unwillingness to cooperate with the management.

It must not be concluded that all accidents resulting from subjective factors originate with the worker. Frequently employers do not provide proper safeguards, safety instruction, and adequate supervision; and foremen often fail to advise the latter concerning points of danger and to instruct them in safety methods.

The relative importance of physical and personal causes is difficult to determine because of the absence of exact knowledge concerning subjective elements. Employers and their representatives are inclined to attribute most industrial accidents to the personal element, particularly to the carelessness of the worker. Long and wide experience is the basis for the conclusion that close to 70 per cent of all accidents are the result of carelessness either on the part of the worker or his fellow servant.[1] The importance of the human factor is generally emphasized by safety engineers and by the National Safety Council. On the other hand, the worker and his spokesman are convinced that the majority of accidents are due to defects in the working environment for which the employer is directly or indirectly responsible. Considerable evidence is assembled in support of both of these points of view, which suggests that it is practically impossible to separate personal from mechanical factors.

In any plant or industry, the relative importance of subjective and objective factors will depend upon the extent of mechanization, the employer's interest in accident prevention, and the general type of workman attracted to the organization. In industries in which machine processes predominate, objective causes will be principally responsible; in those industries in which manual operations prevail, the personal equation will be more important. But in America every effort is made to substitute machine processes for hand operations in the hope of speeding up production. Where employers have a real interest in human conservation, an efficient safety organization is usually provided, with the result that accidents are reduced appreciably. Personal causes invariably will be the more prominent in those plants and industries which use great numbers of youthful, inexperienced, and ignorant workers, unless the establishment is made foolproof. The company's labor policy has much to do with this. If the wage scale is low, hours long, and conditions of employment undesirable, intelligent workers will not be attracted to the plant. The rate of turnover will be abnormally high, giving the establishment an extraordinary quota of new and inexperienced employees who are always a great accident risk.

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[1] National Safety Council Approximations for 1937.

The Safety Movement in the United States.—Self-preservation may not be the first law of life, but it is undeniably a basic human urge. Preservation of life is the central theme of the safety movement which has been so closely integrated with progressive management of industry and business. New problems of human conservation constantly arise as the structure and functions of our industrial system become increasingly complex. This is the reason for the safety movement.

For the origin of the safety movement in the United States, one need go back only to about the year 1907, when, in the iron and steel industry, there appeared a quickened interest in human wastage occasioned by industrial accidents. It took only a brief experience with accident prevention work to demonstrate that the major proportion of serious and fatal accidents in industry are unnecessary. Remarkable, almost unbelieveable reductions in accident frequency and severity rates were achieved in the iron and steel industry, especially in the plants of such large concerns as the United States Steel Corporation. The demonstration of the value of accident prevention in this industry resulted in the spread of the safety movement to other industries. Conservation, originally generated by a humanitarian impulse, soon assumed an economic significance, and what had previously been undertaken more or less grudgingly in a few isolated plants soon matured into a permanent and effective movement.

The Association of Iron and Steel Electrical Engineers has played a significant part in the organization of the safety movement in the United States. Ever since its inception in 1907, this association has made accident prevention a primary feature of its functions, helping to establish the safety movment on a cooperative and scientific basis. At first, particular attention was given those accidents in the iron and steel industry developing from the application of electricity. The scope of the association's interest soon broadened, and a safety program was scheduled for its annual meetings in 1911. So encouraging were the results that the organization of the safety movement on a national basis appeared essential to the coordination of the activities of separate agencies and the establishment of a central clearing house for exchange of information and experience. A joint conference was summoned to meet in conjunction with the next convention of the association, to be held in Milwaukee, Wis., Sept. 30 to Oct. 5, 1912. A comprehensive program was developed, and from this meeting there emerged the National Safety Council, whose achievements are notably large in the annals of the safety movement in the United States. Originally an organization with sixteen charter members, the council has grown to a membership of several thousand, including the majority of the large industrial concerns of the country. The growth of the safety movement has been aided greatly by such bodies as the Interstate Commerce Commission, federal and state bureaus of mines, and state accident and industrial commissions.

The safety movement in the United States, especially during the early years of its development, was not without some influence and inspiration from the Old World. While the American movement was still in its embryonic state, the "Safety Museum" was brought from Europe. In 1907, the first safety exhibit was held in the American Museum of Natural History in New York City, under the auspices of the American Institute of Social Science. From this exhibit there developed the American Museum of Safety, which was finally incorporated in 1911. The educational exhibits which this organization has sponsored and the special medal awards it has made have done much to stimulate a keen interest in human conservation.

Workmen's Compensation and the Growth of Accident Prevention.—There is every reason to believe that the principal motive which impelled the original safety movement in the United States was humanitarian in character. But workmen's compensation legislation, which had its successful inception in the United States no longer ago than 1911 and has long since spread to practically all states of the Union, has been the major factor in the growth of the safety movement.

Prior to the enactment of workmen's compensation laws, employers were accustomed to purchase policies in stock casualty insurance companies and pay annual premiums therefor. When a wage earner was so unfortunate as to be injured in the course of his employment, the able attorneys of the insurance companies were successful in most cases in defeating his claim for damages. The effort was not an especially difficult one since, under the rules of the common law, the employer was legally responsible only in the event that it could be proved that he had failed to take precautionary measures in providing the safeguards required under the state law. Accidents which resulted from the worker's own negligence, or from the carelessness of a fellow worker, or from conditions implied in the occupation and, therefore, assumed by the employee, were not compensable. The primary object of the casualty insurance companies was to defeat the injured workman's claim and so escape the payment of damages. Their expert and highly paid legal counsellors usually found it possible to prove that the accident occurred either because the injured employee or his fellow worker had been negligent, or because of some risk inherent in the occupation and consciously assumed by the employee when he accepted employment with the company. As long as it was convenient thus to shift the burden of financial responsibility, employers generally did not work up a great deal of enthusiasm for the protection of human life in industry.

Workmen's compensation legislation changed all this. Henceforth, industry was to be held financially responsible for the partial indemnification of the injured worker's loss of earning power. Damage suits were to become more or less passé. The financial hazard became so real and inescapable that the employer began to give serious attention to the extent and causes of accidents and the most effective means of preventing them. Accident compensation laws touched the very sensitive pocket nerve of the employer. W. H. Cameron, managing director of the National Safety Council, has expressed the result:

> Because industry has had to pay the bills for all accidents, the larger employers began to learn of the frequency and severity of accidents, the number of lives lost in the course of production, the spoiled material, the interruption of the orderly processes of manufacture. They found, by investigation, that the majority of accidents could be prevented. These employers discovered that it was cheaper to prevent accidents than to pay for them. Therefore, the economic motive for safety received its greatest impetus from the workmen's compensation acts.[1]

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[1] CAMERON, W. H., "Organizing for Safety Nationally," *Annals of the American Academy of Political and Social Science*, vol. 123, no. 212, January, 1926, p. 28.

The extent of the economic burden imposed by workmen's compensation may be comprehended from the fact that, in the single industrial state of New York, awards totaling over $25,000,000 during the year 1935 alone were made to some 70,000 workers. For the entire United States, it has been estimated that over $700,000,000 is paid annually as compensation for killed and injured workers.

The provisions of workmen's compensation laws vary with the different states. From the point of view of the safety movement, primary interest is centered in the tendency properly to impose responsibility and encourage accident prevention. Both to the employer and the employee, the prevention of an accident is far more to be desired than compensation, since this will reduce the employer's insurance cost and save the worker from the lowered standard of living which necessarily follows the reduction in income resulting from an accident. The new tendency is clearly illustrated in the case of the provisions governing workmen's compensation in Wisconsin. In 1925, the legislature of that state passed an experience rating bill which makes it possible for insured employers to receive partial credit or debit according to their accident experience during a five-year period. Moreover, the compensation act has a special provision known as the increased compensation clause, which has had a marked influence upon accident prevention. The provision known as "merit-rating" is as follows:

> Where injury is caused by the failure of the employer to comply with any statute of the state or any lawful order of the Industrial Commission, compensation and death benefits provided by the workmen's compensation law shall be increased fifteen per cent.
>
> Where injury is caused by the willful failure of the employee to use safety devices provided by the employer, or where injury results from the employee's willful failure to obey any reasonable rule adopted by the employer for the safety of the employee, or where the injury results from the intoxication of the employee, the compensation and death benefits provided by the law shall be reduced fifteen per cent.

By Jan. 1, 1938, only two states of the nation had failed to enact workmen's compensation laws, Arkansas and Mississippi. It is not necessary to cover the many points of variation in the laws of these many states; detailed reference to the provisions of one state law will serve to illustrate the manner in which various states have acted in the protection of employees against loss through accident. The California law covers all private employments except agriculture and domestic service. It provides that all

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[1] See *United States Bureau of Labor Statistics, Bulletin* 536, 1931, p. 171.

employees coming within the scope of the law shall be compensated for an injury or disease arising out of employment. Necessary medical, surgical, and hospital treatment are provided immediately without waiting, and cash benefits after a 7-day waiting period equivalent to 65 per cent of the average weekly wage are provided. Temporary total disability is extended for a total of 240 weeks or until payments equal three times annual earnings, and payments continue for life in cases of permanent total disability. Employers are compelled to report all accidents which require medical treatment, or which last throughout the day. They must insure in the state fund or in private companies, or provide self-insurance. The act is administered by the Industrial Accident Commission of the State Department of Industrial Relations, which, in addition to the powers suggested above, has authority to make and enforce safety standards for accident prevention.

Influence of Casualty Insurance Companies in Accident Prevention.—This trend in the development of state workmen's compensation laws reflects the progressive activities of casualty insurance companies whose energies, hitherto spent in defeating the claims of helpless injured wage earners unable to employ expert legal counsel, are now directed into the constructive channels of accident prevention. Because of its contact with numerous plants, the work of the private casualty insurance company in reducing accident risks is probably unsurpassed by any other agency. Although such a company has a humanitarian interest in accident prevention, its primary interest is impelled by economic considerations; it is largely a business proposition. The lower the price of insurance, the larger the volume of business. Premiums can be reduced only in direct proportion to the reduction of the accident risks in the insured establishment. This is the economics back of the casualty company's interest in the progressive diminution of accident rates.

Casualty insurance companies have made their greatest contribution to the cause of accident prevention through the application of the "merit-rating system." The efficacy of this system lies in the fact that it appeals to the financial interest of the employer and speaks a language that management can always readily understand—the language of decreased costs.

There are three possible stages in the development of an insurance rate for industrial plants: *manual rating*, *schedule rating*, and *experience rating*. The two latter constitute what is generally known as "merit rating." Until merit rating is established, the only possible method of procedure is the classification of risks into groups which serve as a basis for preferential treatment for certain industries as against others, a basic rate being worked out for each industry according to its hazards. This is known as the "manual rate." It is based upon the general accident experience of the whole industry and makes no attempt to accord preferential treatment to those individual plants within the industry which have a low accident frequency and severity rate. The classification of all plants in a given industry on the same basis, regardless of accident-prevention records, is obviously unjust.

The merit system of rating, which includes both schedule rating and experience rating, is an attempt to avoid the undesirable consequences of the manual rate. Schedule rating undertakes to vary the manual rate of a particular plant according to the greater or lesser probability of its having the average accident experience of the various establishments in the industry as a whole. It is essentially a reclassification of risks within the manual classification. This reclassification is accomplished by carefully inspecting the physical and mechanical conditions which exist in each plant and developing "credits" and "debits" according to the favorableness or unfavorableness of its showing. Schedule-rating methods have been so refined that they now constitute a fairly accurate measurement of the physical hazards of individual plants. Classification of the causes of accidents and the resultant injuries has aided greatly in this refinement. Relative weights based upon actual experience are assigned to the various causes. In a given industry, for example, 60 per cent of all injuries are attributable to a limited group of causes, such as machine point of operation, machine moving parts, machine driven devices, power transmission apparatus, and elevators. This still leaves 40 per cent of the injuries unaccounted for, the causes of which are more or less subjective. The schedule rating recognizes this situation and provides for more or less undeterminable causes in evaluating the work of safety organization. The schedule gives a credit for each specific phase of safety work, such as supervision, inspection, safety education, and medical treatment, all of which affect the accident frequency and severity rate. Thus the application of schedule rating to the individual plant modifies the manual rate for that plant in accordance with existing physical and mechanical conditions. In order to receive the advantage of the more favorable rating and the resultant reduction in the premium, the employer will invariably promote accident prevention by setting up an efficient safety organization.

While schedule rating is a progressive step toward the equitable adjustment of insurance rates to individual plant conditions, its application is limited principally to the exceptionally large risks. Such a scheme necessarily involves frequent inspection of plant conditions, the expense of which is prohibitive except in large plants. Small concerns with small premiums, therefore, hardly come within the sphere of such a plan. Whether done through a centralized inspection bureau supported by several casualty companies or by the agents of a single company, inspection is a costly process.

Experience rating for accident risks in individual manufacturing plants is used either to modify the manual rate directly or to readjust it in accordance with the schedule rating. The schedule-rating method is not sufficiently complete to warrant the best results, so experience rating has been devised. Experience rating, being based upon the actual loss experience of the plant, indicates to what extent the provisions for which credit has been given by schedule rating actually affect the accident record and then proceeds to readjust the premium accordingly. In other words, schedule rating ascertains the extent to which physical and mechanical safeguards have been installed, whereas experience rating determines the extent to which such safeguards are kept in good condition and utilized effectively by employees. The accident frequency and severity rate is the proper index at this point.

The accident-prevention activities of casualty insurance companies are not confined to the merit rating system. Engineers and inspectors are maintained for the purpose of encouraging the development of safety organization and methods in the insured plants. Advice and assistance are given to the employer in order to enable him to obtain the greatest advantage under the merit rating system. Casualty companies maintain elaborate aides, even to the extent of publishing "industrial safety rules" and other such information for the benefit of the employees. Classification of occupations in individual plants is checked, the causes of accidents are analyzed and interpreted, and effective methods of prevention are suggested. In short, the casualty company seeks not only to insure against existing industrial hazards at a rate equitably adjusted to the risk involved, but also to reduce such hazards to an absolute minimum.

Management's Responsibility for Safety.—The reduction of accidents is fundamentally an internal problem of industry and, as such, must constitute a major responsibility of the employer. The attitude of management toward safety is, after all, the basic determinant of accident prevention. Wage earners can hardly be expected to give a sympathetic hearing to preachments about safety first, if the employer is not doing all within his power to make the physical conditions of employment safe. The ultimate success or failure of accident prevention, the attitudes and practices of foremen and other minor supervisory officials, the functioning of safety committees, and the response of the rank and file of the workers will invariably depend upon the point of view and conduct of chief executives and those who directly control the formulation and application of the company's policies. Constructive results are always forthcoming where the whole organization, from the board of directors and the president down to the subforemen, is convinced of the value of safety and gives unstinted support to the work of the safety department.

Foremen: The Keymen in Safety.—In the prevention of accidents, as in the maintenance of production, the employer must delegate responsibility to plant superintendents and foremen whose cooperation with the supervisor of safety is an indispensable condition of success. It is generally conceded that in the scheme of industrial supervision the foreman is the keyman, because he is constantly in touch with the men on the job. He has an intimate knowledge of the machines they operate and the tasks they perform, knows the peculiar characteristic of each workman, and is familiar with the physical hazards of his department. Upon him must be placed the responsibility of seeing to it that the physical hazards are reduced to a minimum and that his men do not indulge in careless practices which involve the risk of injury to themselves and others. This usually means that the foreman must be educated in matters of safety. He must be taught that a low accident record in his department is as important as a high record of output and that accident prevention is a basic factor in successful production. He must learn that constant vigilance is the price of safety. The maintenance of safe practices on the part of his men must not be taken for granted, rather must assiduous attention be given to tactful presentation of the message of safety at every opportunity.

Physical and Mechanical Safeguards.—In general, the employer's accident-prevention program will consist of the provision of adequate physical and mechanical safeguards, the development of an effective scheme of safety organization, and a practical educational program. The logical place to begin in the prevention of accidents is with the provision of safe conditions of employment. Industrial safety is in a real sense a problem in engineering. Safety features must be an intrinsic part of the design of the machine and of the physical layout and operation of the plant. It is essential that the employer keep abreast of the times, install new devices, and adopt new methods and processes which tend to reduce accident hazards in the plant. Each industry will have its own special hazard, such as the falling of coal and roof in coal mining; the falling of persons, materials, and scaffolding in building construction; and the point of operation in machine industries.

The point of operation is especially important in manufacturing industries. This is the part of the machine where the stock is actually inserted and maintained during the process of forming, shaping, or other necessary operation, and is, consequently, the point of danger when machines are operated without proper safeguards. Here the employee may lose a finger or a hand. The unprotected hand-fed machine is a constant menace to the operator. If it is a machine that emits particles of abrasive materials or metal cuttings, there exists a special hazard to the operator's eyes and other parts of his body. So-called "machine" accidents vary from 10 per cent of all accidents in foundries to 60 per cent in woodworking and sheet-metal goods manufacture. Fully 90 per cent of all machine accidents occur to the men who operate the machines, 80 per cent of which occur during ordinary operations as distinguished from such other duties as adjusting tools, repairing or inspecting, throwing a belt on or off, and oiling or greasing parts.

Great progress is being made in accident prevention through the provision of automatic feeding, which practically makes a machine accident-proof. Another effective device for certain types of machines which emit flying particles is the exhaust system, designed to carry away dust and other particles. Exhaust systems, however, cannot be applied to many machines which are especially hazardous in flying particles, as drill presses, lathes, milling machines, chip hammers, and steam hammers, all of which take their heavy toll in human eyes. In such cases, goggles must be provided for the protection of the worker. The use of protective clothing, such as foundry shoes and leggings, aids greatly in the reduction of serious metal burns in factories where men work around molten metal. The idea of protective clothing is difficult to sell to both male and female operatives at first, but, by intelligent educational methods, the advantages of such devices become so apparent that every normal worker finally accepts them.

All gears, belts, pulleys, and other dangerous equipment must be guarded. Sometimes, it may be necessary to redesign a machine or modify a process in order to reduce the frequency rate and the severity of accidents. In addition to properly designed and guarded machinery, it is essential to keep clear of obstructions all passageways, alleys, cellar ways, and elevator shafts, and to build railings around all floor openings. The whole factory must be lighted and ventilated properly.

Safety Organization.—The installation of appliances and devices for guarding and insulating dangerous places and machines is not sufficient to guarantee a solution of the accident problem. It is necessary also to develop a safety organization, provide safety education, and enlist the cooperative efforts of the entire working force. The effectiveness of the safety organization in any plant will depend upon the quality of its direction and supervision. This is the reason the selection of a competent safety engineer or supervisor is so important. "The lack of definite plans and intelligent supervision is as fatal to safety work as it is to salesmanship, efficient work, or business management; and when safety work has not brought good results in the elimination of accidents, the method of organization has usually been found to be at fault in some respect."[1]

It is a primary function of the safety supervisor to enlist the cooperation of the whole personnel of the plant in the campaign for the conservation of human resources. This is most effectively done through a system of committees adjusted to the needs of the individual plant. There may be an *inspection committee* which makes a semimonthly inspection of the plant and studies accident hazards, lighting, items of maintenance, and general housekeeping; a *fire committee* which makes a semimonthly inspection of fire hazards and all fire equipment; a *first-aid and sanitation committee* which has charge of first-aid work, hospitals, and all medical supplies, and makes thorough inspection of sanitary conditions of the plant, and all company dwellings; a *publicity and educational committee* which keeps bulletin boards clean and attractive, instructs men about the plant, and plans the monthly meeting on safety; and an *accident-investigation committee* which makes an investigation of all serious accidents and reports on the causes and methods of future prevention. The membership of each committee will depend upon the needs of the organization. The personnel of the committees is usually changed about every 3 months, in order that a large number of employees may have an opportunity to serve on them and thus acquire a real interest in accident prevention.

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[1] The Travelers Insurance Company, *Industrial Safety Rules*, 1934, p. 5.

Appointment of employees to one or another of the safety committees has a marked tendency to educate the workers in the fundamentals of safety and to stimulate their interest in the whole safety program. Experience has shown that this opportunity to exercise themselves on a higher plane and demonstrate their ability in a semiofficial capacity is one which is keenly desired and enthusiastically fulfilled. In no other way is it possible to build up an organization of safety experts without great cost, and no other method results in so favorable a reaction upon the morale of the whole personnel. It is essential to keep all safety committees busy and wide awake and to provide them with information concerning the newest and best developments in the field of accident prevention.

Educational Methods.—In numerous factories and mills, where every conceivable mechanical safeguard has been installed, it has been found that accidents have been reduced only 14 per cent. Such experience has led to the conclusion that in many instances fully 86 per cent of the accidents are attributable to some fault of the workers themselves. The experience of many other plants indicates that from 25 per cent to 50 per cent of all accidents can be prevented by effective organization and safeguarding. Further elimination must come through education of employees. Only a limited achievement can be expected where employees have not been educated in the importance and ways and means of human conservation. The problem is a real one. Adult minds, long since accustomed to habits of thoughtlessness and carelessness, must be trained to think in terms of safety.

Membership on safety committees is one effective way of accomplishing this. There are others, such as plant rallies, department rallies, contests, talks by foremen, bulletin boards, and the plant magazine. "No Accident Month" campaigns are often made a success through weekly rallies, and the campaign may be carried on through the year by means of monthly mass meetings. In this way, one large steel mill, employing 7,500 men, reduced its lost-time accidents 63 per cent within a year, and the fabricating department of another mill went 5 years without a lost-time accident as compared to an average of one a month prior to the adoption of rallies. The spirit of competition is frequently capitalized in the promotion of safety. Three general classifications of safety contests have been suggested:[1]

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[1] BURKE, T. A., "Safety," *Factory Management and Maintenance*, vol. 94, July, 1936, p. 282.

1. The national competition in which special industries compete with one another on a national scale.
2. Interplant contests conducted between different plants of the same city or plants of the same company in different cities.
3. Interdepartmental contests within individual plants. Unless complete accident records are kept no contest can take place.

These contests may follow the *lottery plan* of the Jones and Laughlin Steel Company. The winners, who at times receive cash prizes amounting to $500, are determined by lottery. Only those with accident-free records in their respective departments are eligible to enter the contest. In the Philadelphia division of the General Electric Company, the lottery prizes usually take the form of attending national conferences on company time and at company expense. Sometimes, bonuses are offered for excellent accident records, whereby workers who have not experienced a lost-time accident for a certain period are given a cash bonus equal to 1 day's pay. The Portland Cement Association awards a giant concrete trophy to each of its 175 member plants which maintains a perfect safety record for a year. When the trophy is won a celebration is planned for the day upon which the award is to be made, and the celebration usually becomes a community affair. This association has also inaugurated the "safety minute man" plan, under which each employee is asked to sign a card pledging himself to work, walk, and drive safely. Instead of the positive type prize, a few plants have given *booby prizes* to the department or individual with the weakest accident record. The "Royal Order of the White Elephant" developed from a "razzing" program in the sales department of the General Motors Corporation. A picture of a white elephant is sent by mail to the foreman of the department having the poorest rating, and he automatically becomes president of the order. A perfect nonaccident record is the only safeguard against much embarrassment through the "razzing" campaign which follows the initiation.

Safety is also encouraged by the use of "*stunts*" that focus attention on safety measures. One division of the Fisher Body Company has "gone collegiate" with its new employees. Instead of having the newcomer wear the conventional "green freshman cap," he dons a red cap which identifies him as a new man who should be helped (not razzed) and given friendly pointers in safety matters. Again, "*safety police*" may be [illegible] popular employee vote, whose duty it is to see that all safety rules and regulations are adhered to. Violators are "arrested" and brought before a kangaroo court in which there is a trial and the pronouncement of sentence. *Safety exhibits*, *contest barrels*, *safety trains*, and *prize-winning balloons* are examples of other stunt methods which vary greatly among individual plants.

Special talks by foremen have a large place in safety campaigns. It is now common practice for foremen, at the beginning of each turn, to give an informal talk on the necessity and wisdom of exercising every possible precaution in the prevention of accidents. A meeting in a toolroom comes vividly to mind. The foreman gathered his men about him for 5 minutes at the beginning of the shift and discussed the special job for the day, pointing out the particular hazards which might arise and suggesting the best ways of avoiding accidents. Seated on the benches and on the floor the men listened intently, and it was not difficult for one to realize why the lost-time accidents in that department were almost unbelievably low. In the same quiet, sincere manner this foreman talks safety to each new employee assigned to his department, the "safety sermon" being delivered before the new worker starts on his job.

Bulletin boards and signs play a large part in the accident prevention program of the modern industrial plant. By catchy slogans, brief warnings, and pictures illustrating the safe way of doing things, the bulletin board preaches safety in a manner visible, readable, and understandable by all. Slogans catch the eye of the most indifferent. "Safety First—Be Careful Always," "A Safe Plant is an Efficient Plant," "Make Safety a Mill Habit," "Better Be Safe Than Sorry," are slogans which one finds posted throughout various plants. On the bulletin boards at the entrance to the plant and at the entrance to every department may also be posted the weekly, monthly, and yearly records of each department in the plant and each plant in the district. These are especially effective in stimulating interest during the interdepartmental or interplant contests. The safety message is also often printed on clock cards and pay envelopes.

The Employee Magazine and Safety Education.—Someone has remarked that the foundation of safety is the desire of management and men to be safe. Safety is largely a matter of salesmanship. There is no more effective sales agency for safety or any other plant activity than the plant paper. The average workman is not willfully careless and negligent, but he does tend to drift into habits of thoughtlessness and [illegible], so that the necessity of being careful as he goes about his work must be kept constantly before his mind. Here the plant paper does a remarkable work. It discusses dangerous practices, points out the human values involved in watching out for oneself and one's fellow workmen, visualizes through picture and cartoon the cost of accidents to the injured laborer and his family, instills the spirit of emulation by presenting and lauding the no-accident record of fellow workers, and describes the sheer joy of living as against the unromantic business of injury and death.

In some plants, special safety editions are issued semiannually, and the results seem to justify the additional cost. Many editors, however, doubt the wisdom of special safety editions, preferring rather to make safety propaganda a part of the regular issues of the paper. It would seem to be wiser to give thoughtful attention to the regular presentation of safety information than to emphasize it spasmodically in special editions. Constant publicity is necessary to keep men alert in the business of human conservation. The thought of safety must be sandwiched in a tactful manner. It cannot be forced upon workmen; men must be taught to want to work safely.

Educating the New and the Young Worker in Safety.—Safety really begins, or should begin, in the employment office. The selection and placement of employees offers an opportune occasion for promoting safety. Careful selection and placement on the basis of physical and mental qualifications will mean that no men are employed who are physically or mentally deficient and likely to become great accident risks. Similarly, men will not be assigned to work which they are incapable of performing efficiently and without danger of injury to themselves and to their fellow workers. In the employment office, the new employee should be instructed with regard to the company's safety activities and his attention called to the importance of knowing thoroughly the safety rule book which is given him before he starts work. At this time, too, the human and economic value of safety can be presented to him.

The safety message of the employment manager is especially important in the case of young workers just out of school and entering upon an industrial career. Such youthful workers combine the greatest promise and the greatest danger for conservation of life in the organization. They offer the greatest promise because, unlike old and experienced workers who have fallen into careless habits and have acquired a certain contempt for danger, they are plastic and impressionable, and a vivid description of serious consequences of accidents will stick in their imaginations. They constitute the greatest problem because they bring to industry the impetuosity, curiosity, ignorance, daring, and aggressiveness of youth, all of which may make them a source of accidents to themselves and to others. They must be taught not to take chances and not to let their inquisitiveness go beyond the limits of caution and safety.

The Health Department's Part in Safety.—Healthy workers are likely to be contented workers and are good risks; misfits are serious accident risks. This explains the importance of the physical examination in the selection and placement of employees. In some plants, every employee who suffers an accident is examined to determine whether some physical deficiency contributed to the accident. In many cases, it has been found that momentary lapses sufficient to cause serious accidents have been due to eyestrain, habitual constipation, indigestion, and other remediable conditions. Chronic kidney trouble, heart disease, and high blood pressure are often found among the contributory causes.

When an accident occurs, immediate medical attention is imperative as a means of avoiding infection. An analysis of 2,500 accident cases in the Norton Company, Worcester, Mass., for example, showed infection in but 0.5 per cent, and in these cases the men had not applied for treatment until 24 hours or more had elapsed following the injury. In no case was there an infection when the injured workman had applied promptly for treatment and had not tried to dress his own wound. One of our largest railroads has the same kind of record, and six very large plants, varying in product from rubber goods to shipbuilding, have had only 189 infections in 214,144 wounds. Prompt neutralization of industrial poisons in plants where lead paints, turpentine, varnishes, and other poisonous substances are handled is essential to prevent infection.

An adequate safety program includes a well-organized, comfortable, well-equipped first-aid station. Whenever a disabling accident occurs, it is good practice for the industrial doctor to get in touch with the safety engineer, superintendent, or foreman, before the injured employee is allowed to leave the plant. Only in this way can proper first aid be administered, the severity of the accident be determined, and a sound decision made as to whether the employee can soon perform light work.

Does Accident Prevention Pay?—At the inception of the safety movement in the United States, there were many who were critically suspicious, and not a few of the more pessimistically inclined declared, "It can't be done." Even yet there are employers so conservative or indifferent as to be unconvinced. Each year, however, piles up the indisputable evidence of the economic and social value of accident prevention. The economic values of safety consist in safeguarding the health and lives of the members of the community.

Industry is inextricably related to social welfare and progress; that relation is nowhere so apparent as in the conservation of human life.

For industry as such, accident prevention is profitable. American experience has proved that accident prevention increases production, decreases overhead charges, cuts down the rate of turnover, and reduces the cost of compensation. Physical disability means lost time which in turn means loss of skill and experience. In discussing the cause of accidents, it was definitely shown how they slow up the plant and affect both the quality and quantity of production. Whatever slows up production, increases cost of insurance, and makes replacement of employees necessary invariably increases overhead charges. Employers known to have high accident rates do not attract the best workers and they normally have a high rate of labor turnover, which enhances the cost of operation and affects output adversely.

Insurance against accidents is a nonproductive expense, and accident prevention is cheaper than accident compensation. The United States Steel Corporation expended over $27,980,000 between the time that extensive safety activities were first inaugurated in 1906 and the end of 1936. But in the minds of the corporation's executives, there is little doubt but that accident prevention pays, both from the standpoint of effecting a monetary return on the investment and of saving life and limb. Between 1906 and 1936, serious and fatal accidents in the operation of all the subsidiary companies of the United States Steel Corporation were reduced 61.71 per cent and 78,122 men were saved from serious or fatal injury. Since 1912, disabling accidents (accidents causing loss of time greater than the balance of the working turn) were reduced 88.04 per cent, which means that in 24 years 644,831 accidents were prevented, and this number of men were thus saved from injury.[1] It is a common experience in the steel industry now for plants employing several thousand men to run from 1 to 6 months without a lost-time accident, and safety engineers are convinced that soon plants will have records of a whole year with no lost-time accidents. This possibility is well indicated by recent trends. During the 10 years preceding 1937, the frequency rate and the severity rates for all types of occupational injuries throughout the United States turned steadily downward until in 1936 these respective rates stood at 39 per cent and 60 per cent of their former 1926 levels.[2]

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[1] From a special communication from the office of the corporation's vice-president under date of Jan. 14, 1938.

[2] See computations based upon individual company reports to the National Safety Council.

Conditions That Impede Progress.—There are considerable numbers of employers with an ultraindividualistic bent who have never become reconciled to workmen's compensation laws and who, consequently, do not take kindly to the safety movement. They blame all accidents upon the worker and ignorantly refuse to introduce constructive safety measures. Despite the remarkable accomplishments of the safety movement, moreover, it must be admitted that as yet only a minority of employers in various countries are maintaining consistent activities for the purpose of safeguarding the lives and limbs of their workers. There are several reasons for this. Although the collective accident bill runs into many hundreds of millions of dollars, the cost to the individual company is relatively small, generally less than 1 per cent of the total cost of doing business. Executive officers are concerned chiefly with the other 99 per cent and are willing to leave the safety job to the safety supervisor and employees.

Human beings manifest an almost instinctive unwillingness to think of unpleasant things. Thus, it is difficult for the public mind to become interested or aroused except in spectacular cases. There has been a lack of leadership in the safety movement; greater respect for it will come when more capable leaders are enlisted. Enforcement of state factory laws is frequently very lax, inspection is often inefficient, and many state laws are in themselves very incomplete. This means that employers in many states are not compelled to assume the responsibility for accidents. There is marked indifference on the part of those who control the operating policies of corporations. Management, even when deeply interested in safety, is frequently compelled by company directors and stockholders or owners to cut expenses in order to increase dividends. Such persons never come into intimate contact with the tragedy of accidents and are so wrapped up in their own smug satisfactions and comforts that they are either unable or unwilling to visualize the misery of the injured workers and their families.

It requires imagination to visualize the enormous economic and human waste involved in accidents. Despite the slow progress of accident prevention, signs are not lacking that the future is bright for human conservation in industry. Apathy and hostility are gradually being overcome. Accident prevention must be made a primary responsibility of industrial management. This is necessary in the interest of social and industrial progress.

CHAPTER XXVI

HOURS OF LABOR IN RELATION TO HEALTH AND OUTPUT

The Problem of Hours in Modern Industry.—The modern industrial system hardly had its inception before the question of hours began to disturb the peace of employment relations. Ever since, it has remained a perplexing problem. When the community first became seriously concerned about the influence of the new industrialism upon the health and welfare of wage earners, interest was centered chiefly in the relation of hours of work to the well-being of children and adolescents and later was extended to women. In more recent years, all laborers, including adult males in those occupations which involve special hazards to health and life, have received widespread attention and now claim the thought of industrial physiologists.

Traditionally speaking, employers have been opposed to the shorter working day, their opposition being based for the most part upon the belief that output is always in direct ratio to the length of the working shift. In the beginnings of modern industrialism, the 16-hour day, even for child workers, was accepted as conducive to large output and great profits. Ever since, attempts to reduce the hours of labor have been rejected as economically unsound and socially undesirable. The public and unionized workers, however, have not remained quiescent in the face of widespread abuses and the accumulating evidence concerning the effect of hours upon health and productivity. Consequently, the movement for the shorter workday has gained momentum and has met with remarkable success.

The progress of the movement for reduced hours of employment is attributable to numerous factors. Conspicuous among these is the excellent example of those philanthropically minded employers who, from the days of Robert Owen, have been in sympathy with greater leisure for the masses. Such employers have been vitally interested in the promotion of health and welfare among their employees and have provided not only clean and well-ventilated work places but also reasonable hours of employment and other advantages not commonly associated with the spirit of individualism. No less important has been the influence of social reformers who have prevailed upon legislative bodies to enact laws designed to safeguard women and children in all occupations and male workers in hazardous industries from the deleterious effects of excessive hours. Prominent also among the sponsors of the shorter workday has been organized labor with its old ideal of "eight hours for work, eight hours for sleep, and eight hours for what you will," and its new aim of a 30-hour week for the sake of a wider distribution of employment. In order to strengthen the prestige of its own forces, unionism has sought in the past the shorter workday for adult workers through the agency of collective agreements rather than through law. Beginning with the 30-hour week movement in 1935, however, it has sought to gain effective legislation reducing hours of labor. This movement was doubtless conceived in the National Recovery Act which established a strong precedent for hour and wage legislation. Many employers have voluntarily reduced hours of employment because they have been convinced that such action would have a favorable effect upon efficiency and good will; many others, less generous in spirit, have followed suit, either under the compulsion of law or under the necessity of obtaining their share of the better class of employees.

Viewed socially, the problem of hours is related directly to constructive citizenship. An excessively long working day allows no leisure time for the enjoyment of family life or the performance of the ordinary duties of civic life. Modern democracies can hardly endure, much less succeed, if the majority of the citizenry is denied time and opportunity for participation in community affairs. The economic aspects of the problem have to do with the relation of hours to efficiency and output. The primary concern here, as Taylor demonstrated in his early experiments, is to discover the maximum length of the working shift that is compatible with the greatest productivity at minimum expense. Physiologically, the problem of hours develops from the effect of the working shift upon health and safety. The psychological phase of the problem involves time and opportunity for the normal expression of basic human impulses. Self-expression is obviously impossible if the hours of work are so excessive as to leave the employee no time and energy for the pursuit of those noneconomic activities for which the law of his being causes him to yearn. In its moral and spiritual aspects, the problem of hours has to do with the provision of leisure time for attention to religious duties and the cultivation of moral thought and behavior.

The Length of the Working Day.—Until recently there has been no uniformity in the number of hours that men and women work in industry; they have been 6, 7, 8, 9, 10, or more, depending upon the nature of the occupation, the spirit of the company, the presence or absence of unionism, the existence of federal or state regulation, and many other conditioning factors. Moreover, there is no unanimity of opinion as to what constitutes the most desirable number of hours, nor can it be claimed that there obtains an absolute standard of measurement applicable to all occupations and industries. Yet, as an American physiologist once observed, "It is a fact beyond doubt that, from the standpoint of accomplishment by the human machine and its conservation, the day should tend toward brevity rather than length."[1] Scientific managers know quite well that, in order to meet the demands of greater production, it is physically possible to speed up the human machine, to drive it at an extraordinary pace. Physiological science is teaching the employer, however, that there are fairly well-defined limits beyond which it is economically unwise to drive the working force and that this boundary line of endurance, if no other, will automatically prescribe the maximum number of hours in the working shift.

The difficulties arising when one attempts to determine the actual length of the working day that should prevail are almost insurmountable. Some things are very clear. For instance, there is experiential basis for the belief that the 9- or 10-hour day is physiologically and economically unsound and should have no place in the industrial and business life of a progressive and enlightened people. On the other hand, there is as yet hardly conclusive evidence in full support of the 6-hour day, except perhaps in those hazardous industries in which vitiated air and poisonous substances make a longer day undesirable. The nature of the enterprise must, therefore, be considered in any scheme to determine scientifically the proper working day, although the 6-hour shift might well be adopted as the immediate ideal for all occupations.

In every industry, the physiological factor of health must be considered of primary importance. Social considerations involving leisure for the enjoyment of home and the performance of civic duties doubtless urge the adoption of a standard workday for all industries but scientific method would prescribe considerable variation for different occupations. Such procedure might logically limit the workday to 6 hours for vessel men and their assistants in a blast furnace and for coal and metal miners but would hardly fix a 6-hour day for farm hands or office workers. There can be no doubt that advanced industrial countries are tending in the direction of a maximum of not more than 7 or 8 hours a day, with provision for a lesser number in hazardous industries.

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[1] Lee, F. S., "The Physiologist in Industry," *Bulletin of the New York Industrial Commission*, vol. 3, October, 1923, p. 13.

The Fair Labor Standards Act of 1938.—Many states have long been protecting women and children from the unsocial results of excessive hours and substandard wages, but only since the turn of the century have hours for the average worker begun to approach 40 per week. In 1900 the average number of working hours per week in American industries was 57.3; in 1910, 54.6; in 1920, 50.4; and in 1930, 41.5. Under the National Recovery Administration some 50 per cent of all employees worked under codes providing a 40-hour week in October, 1934, and only 8 per cent were included under codes allowing more than 50 hours of work per week.[1] Since then many organizations have voluntarily maintained these standards.

By far the greatest single impetus leading toward the shorter work week promises to come as a result of the recent enactment of the Fair Labor Standards Act. Section 6 of this act, commonly known as the "wage-hour" law, provides that all employers coming within its scope shall pay to their employees engaged in interstate commerce minimum wages beginning at 25 cents per hour the first year, and reaching up to a level of 40 cents per hour after the seventh year from the effective date of the act. Section 7 establishes a maximum work week of 44 hours during the first year, decreasing to 42 and 40 hours during the second and third years, after which no one subject to the act shall work more than 40 hours unless paid overtime wages, except by special consent or under terms of a special trade agreement. Other important sections prohibit the interstate shipment of products made by child labor; provide for necessary administrative machinery, investigations, court review, and penalties; and establish an exemption list. Although its constitutionality remains to be tested, enforcement of this new law promises to lessen traditional wage-rate discrepancies between certain industries and localities.

Movement toward the 5-day Week.—When in the autumn of 1926 Henry Ford formally announced the adoption in the Ford plants of the 5-day week, something of a national sensation was created, and considerable discussion over the economic consequences of such a program took place. Today, the 5-day week has become a fairly well established custom in many lines of industry and business. In reviewing this trend, the United States Department of Labor has found that the practice of the 5-day week is general among companies in such industries as printing, building, automobiles, clothing, and rubber manufacturing, and certain public utilities. But the 5-day week is not yet universal in the United States and, in fact, is not even followed by all individual organizations within the industries just cited.

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[1] Brookings Institution, *The National Recovery Administration.* Chaps. XI–XIV.

In initiating the Ford Motor Company's 5-day week plan, Mr. Ford said, "We have decided upon and at once put into effect through all the branches of our industries the five-day week. Hereafter there will be no more work with us on Saturdays and Sundays. These will be free days, but the men according to their merit, will receive the same pay equivalent as for a full six-day week. A day will continue to be eight hours, with no overtime."[1] The company had experimented with the 5-day week for some time and had reached the conclusion that "Now we know from our experience in changing from six to five days and back again that we can get at least as great production in five days as we can in six, and we shall probably get a greater, for the pressure will bring better methods. A full week's wage for a short week's work will pay."[2] Mr. Ford was convinced that this country was ready for the 5-day week and that it was bound to become general in order that the people may absorb production and remain prosperous. Greater leisure will permit the satisfaction of already established wants and develop new ones. He did not fear that the workers would use their greater leisure unwisely and was convinced that the economic advantages would be marked. "We find that the men come back after a two-day holiday so fresh and keen that they are able to put their minds as well as their hands into their work."[3] Given the opportunity, employees learn to use leisure time more effectively. A day off is no longer a day drunk and is no longer so rare that it has to be celebrated. "But it is the influence of leisure on consumption which makes the short day and the short week so necessary. The people who consume the bulk of goods are the people who make them. That is a fact we must not forget—that is the secret of our prosperity."[4]

The late Elbert H. Gary, when chairman of the board of directors of the United States Steel Corporation, consistently opposed such progressive movements as the shorter workday and took serious issue with Mr. Ford's new departure in policy when the program was announced. In this position, Mr. Gary was supported at first by most employers. To them Mr. Gary's statement that the 5-day week was impractical in any business was a sound one, as also was his opinion that it is illogical to pay for 6 days when only 5 days are worked.[1] Despite the opposition, the movement for the 5-day week has continued to develop, especially since Mr. Ford has demonstrated that the 40-hour week is more than adequate to meet the reasonable needs of the nation.

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[1] *Monthly Labor Review*, vol. 23, December, 1926, p. 10.

[2] *Ibid.*, pp. 10, 11.

[3] *Ibid.*, p. 13.

[4] *Ibid.*

The 6-hour Day.—To most employers recent proposals for a 6-hour day are more astounding than Mr. Ford's inauguration of the 5-day week. Lord Leverhulme, internationally famous as a successful employer of labor, several years ago caused considerable excitement on both sides of the Atlantic by endorsing the 6-hour day.[2] An excerpt from the plan which he presented to his board of directors for inauguration in the soap-manufacturing industry of Great Britain will indicate his method of procedure:

> The general features of the scheme are, first, with regard to day-workers and piece-workers, that we shall work in two shifts—six hours each shift. The morning shift will commence at 7 o'clock, and, after a break of a quarter of an hour from 8:45 for some light refreshment, they will continue to work until 1:15 p.m. At 1:15 the morning-shift work for the day will be over. They will not return to their work until 7 o'clock the next morning. This makes a total of six working hours per day, with 15 minutes break for a meal, for six days in the week, Monday to Saturday, included. When we come to consider the afternoon shift, there is a strong feeling and desire to retain the Saturday afternoon holiday; and to meet this wish the afternoon shift will only work five afternoons, the average being seven hours twelve minutes each afternoon, instead of six afternoons of six hours. Therefore, the afternoon shift will commence at a quarter past 1 (there will be a break of half an hour for refreshment from 4:45 to 5:15 p.m.) and will stop at 9 p.m., but on Friday will stop a quarter of an hour earlier at 8:45, so that the weekly average is 36 hours.[3]

Because he desired to arrange the working period with the least inconvenience to the family of the wage earner, Lord Leverhulme found some difficulty in providing a schedule for night-shift workers. To divide the 24 hours into four equal shifts would mean that night workers would disturb their families. A certain irregularity in the working period was necessary to avoid this difficulty. He stated:

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[1] *Ibid.*, pp. 16, 17.

[2] See his *Six-Hour Day and Other Industrial Questions.*

[3] *Monthly Labor Review*, vol. 9, July, 1919, p. 160.

> It means that on the night shift a man will work 8 hours as at present, starting at 10 p.m. and finishing at 6 a.m.; but this will be balanced by the days when he is only working 5 hours and 20 minutes, and this in a month will give exactly 6 hours a day, so that one week out of the four a man will be working 8 hours at night and the other three weeks he will be working only 5 hours and 20 minutes a day. Of course, the shifts will be changed weekly.[1]

Lord Leverhulme was convinced that because it would be less fatiguing than current longer shifts the 6-hour shift would result in an increase of at least 35 per cent in the efficiency of the workers and that, consequently, as much work would be done in 6 hours as was being done in 8. In addition, there would be a reduced overhead cost per unit of product, because the machinery and equipment would be used through two 6-hour shifts for a total of 12 hours as against only 8 hours under the prevailing schedule, an increase of 50 per cent. This would mean greater economy and larger output. The same wages would be paid for 6 as for 8 hours of labor, this being possible because of decreased overhead charges and increased productivity of human and mechanical factors.

The American Federation of Labor in its 1919 convention endorsed the 6-hour day, and similar sentiment has been expressed by other groups of workers and certain individuals. Since that time, organized labor has fought tirelessly for shorter hours with relatively more pay. In January, 1935, the American Federation of Labor, through Mr. William Green, its president, officially launched the fight for the 30-hour week, a movement that is bound to gain strength in the United States and which, in the course of time, doubtless will be quite generally successful.[2]

Hours and Output.—Although the success of the movement for the shorter workday does not per se imply that the employers of labor have abandoned their traditional position that output varies directly with the number of hours worked, the accumulation of evidence and experience is leading many of them to the conclusion that, within certain limits, output may increase as hours of labor decrease. There is every reason to believe that the employer's natural desire for increased production will be satisfied not by lengthening but by shortening the working day and the working week.

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[1] *Ibid.*

[2] See particularly William Green, *The Thirty-Hour Week*, American Federation of Labor, 1935.

In 1900, the famous Zeiss Optical Works of Jena, Germany, reduced its working day from 9 to 8 hours without lowering its rate of piece wages. The result was an increase of 16.2 per cent in the hourly earnings of the employees and a 3.3 per cent increase in the daily wages. At the Engis Chemical Works in Belgium, it was found that the same workers at the same furnaces with the identical tools and raw materials produced in 7½ hours as much as they had been producing in 10 hours of work previously.

Similar results have been experienced in certain establishments of the United States since the day when the experiments of Taylor called the world's attention to the possibilities of such accomplishments. When the hours of labor were reduced from 10 to 8 in the bituminous coal mines of Illinois, the average amount of coal mined daily by each man increased from 2.72 to 3.16 tons. A few years ago a company manufacturing electric lamps in New Jersey desired to reduce its output by 5,000 lamps during the slack summer months. Although there was a 6-hour decrease in the working week, the number of lamps produced per week remained at the original figure. Some months later it was decided to reduce permanently the working week from 50 to 48 hours, following which there was a slight falling off in the output of the machine departments but an increase in the hand departments, so that the total output of the factory remained the same. President J. F. Welborn, of the Colorado Fuel and Iron Company, summarized the experience of his company as follows:

> Careful analyses of operating results between various 12- and 8-hour work periods have been made and show these results to be even more satisfactory than we had realized before. The trend of production per man-hour, with unimportant exceptions, has been upward since the adoption of the 8-hour day; and in every department of our steel manufacturing operations, from blast furnace to the wire mill, our production per man-hour is now greater than it was when all of these activities were operating on the 12-hour shift. Comparing the results of the last few months with periods of similar production when basic rates were 10 per cent lower than current rates and the working time 12 hours per day, we find that almost without exception our labor cost per ton is lower than in the earlier periods.[1]

Similar testimony, born of a long and successful experience, is given by Henry Ford:

> With the decrease of the length of the working day in the United States an increase of production has come, because better methods of disposing of

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[1] The *American Labor Legislation Review*, vol. 13, September, 1923, p. 189.

men's time have been accompanied by better methods of disposing of their energy. And thus one good thing has brought another.[1]

It must not be concluded that increase of production following a reduction in hours is a universal experience. There are many instances where the net results of a shorter working day are still uncertain. Such organizations as the Hershey Chocolate Company, the International Shoe Company, Munsingwear Incorporated, Pacific Portland Cement Company, and the Western Electric Company have recently reported that the shorter working day has doubtless been partially responsible for an increase in output per man-hour. It is significant that these companies in making this observation hasten to add that they seriously question whether the average worker actually produces more at the end of a 36- or 40-hour week than he does at the end of a 48-hour week.[2] An executive of the Western Electric Company summarizes the problem in these words:

> When a change in the length of the working day is introduced, other physical conditions in the worker's situation are not ordinarily static. The worker group may be concerned regarding lay-offs if the change occurs at a low point in employment activity, and if such a change occurs when production is being increased it is usually accompanied by the induction of new workers which, after a short period of acquiring skill, may have the effect of setting a new pace for those originally in the group. Where physical changes are taking place, the group itself is continually increasing its skill.
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> There is also the matter of changes which are introduced in the product itself, in methods, and in the instrumentalities of production. Then, too, there may be a temporary spurt in production occasioned by an acceptable change in the work situation which occurs also when other conditions are similarly introduced, such as wage increases, good psychological reactions to group social and athletic relationships, etc.[3]

In view of these and other changing and counterbalancing forces, the only positive way of gaining definite answer to the question, "Does the shorter workday increase productivity?" is through long and continued scientific observation. It is only natural that individual output should vary over shorter periods of time, first increasing and then slumping in production depending upon multitudinous physical and psychological factors.

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[1] United States Bureau of Labor Statistics, *Monthly Labor Review*, vol. 23, December, 1926, p. 13.

[2] From special communications to the authors in December, 1937, and January, 1938.

[3] Special letter under date of Dec. 31, 1937, from Mr. G. A. Johnson, personnel director.

Perhaps the best objective study bearing upon the relationship of hours and other factors to output is that recently completed with respect to certain workers in the Western Electric Company.[1] This company, in 1927, placed six young women in a special test room where they remained under constant observation for 5 consecutive years. During this period of time five of these operators worked as skilled assemblers of small electrical relays, work that they had been doing prior to the time the experiment was started. The sixth operator continued her former duties of supplying the other five workers with the necessary parts for assembly work done along a regular assembly table at which the other five sat.

During this experimental period a number of changes were introduced, such as changes in the length of the workday, in the seating order of the five assemblers, and the introduction of rest periods. An executive was constantly on hand in the test room taking care of routine duties and keeping daily records of output and performance. An electrical device was installed which automatically clocked and recorded the time consumed in the complete assembly of a relay unit for each of the assemblers. Since an average of one relay was finished in about 60 seconds by each worker, a minute-to-minute record of the entire experimental period was obtained. Other observations had reference to the quality of work performed, quality of parts supplied, physical circumstances, conversation, and all other similar factors influencing production. Even such physical factors as the number of hours spent in bed by each worker during the night, the effect of vacations and holidays (both in anticipation and in retrospect), the periodic illnesses of workers, and the daily, weekly, and annual cycles were carefully recorded and examined.

The findings of this detailed experiment have led to the conclusion that output of the group was mainly conditioned by the social relationships developed between the operators, rather than by any peculiarities of their physical conditions.[2] The weekly rate of output on the part of each worker was found to be variable; the rate changed markedly from one week to the next. Intermediate variations lasting much longer than a week, but less persistent than the long-time trends, were also discovered. The only important instance in which a combination of physical changes affected output occurred when weekly hours were raised substantially in combination with the discontinuance of all rest pauses and midmorning refreshments. Even in this instance, the output rate did not drop to the level which existed formerly when the same conditions prevailed. Moreover, after a lapse of a short period, the former output rate was again attained and even increased. Apart from this one instance, there was no major evidence contrary to the general conclusion that *changes in physical factors do not account for the more obvious changes in work output.* Output tends to be influenced mainly by psychological, not physical, conditions, when confined within certain limits of the working day.

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[1] WHITEHEAD, T. N., *Statistical Studies in Industrial Research, Second Progress Report*, Harvard University Graduate School of Business Administration, June, 1934.

[2] *Ibid.*, p. 2.

Other Factors Influencing Output.—There are many instances where immediate stimulation of production has followed a change in hours, only to be superseded by a decline in output after the workers become accustomed to the revised schedule and the newness of the change has worn off. Another influence is the nature of the process. Experience in England and the United States indicates that it is more difficult to maintain production by reducing hours of work in industries largely dependent upon machinery, which have already been speeded up to the maximum point of speed and efficiency, than it is in occupations calling for hand labor. In the textile industry, for example, where the speed of the machine largely governs the activities of the workers in certain processes, a reduction in hours will generally not be accompanied by increased output, if the machines have been set to maximum efficiency. In the same industry, where processes require the human worker to be an important factor, the rate of production is likely to increase with a decrease in hours.

One process in the textile industry which is wholly dependent upon the deftness and dexterity of the worker is known as "reneedling." As the name implies, this process consists of threading a vast number of needles and requires good eyesight, great concentration, and well-coordinated movement of the hands. An operative who averaged about 32,000 needles a day while the 54-hour week was in vogue found that from 39,000 to 41,000 needles could be averaged after the 48-hour week was introduced.[1] In industries where the processes are such that an increased rate of production is hardly possible, compensation for decreased output caused by shorter hours of work must be looked for in the better health and contentment of the working force, which should result in less absenteeism, fewer accidents, and a lower percentage of labor turnover, all of which are valuable considerations to the employer.

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[1] United States Department of Labor, "Some Effects of Legislation Limiting Hours of Work for Women," *Women's Bureau, Bulletin* 15, p. 20.

Still another qualifying factor is the character of the work itself. When the work is heavy and exacts considerable muscular activity, a diminution of output tends to follow continuous activity for an extended period. In such cases, a reduction in hours tends to increase the hourly level of output to a more noticeable extent than in cases where the work is light.

Although it is too early yet to speak with finality concerning the influence of the shorter workday upon industrial output, the mass of statistical evidence gathered in various countries seems to support a number of conclusions. Within certain limits, a reduction in the number of working hours tends to be accompanied by a greater output per hour and by a decrease in the number of absences and accidents. A reduction in the number of working hours up to a certain point invariably increases output in those occupations where the human factor is the controlling one, or where the human and mechanical factors are fairly well balanced in their importance. A reduction in the number of working hours invariably fails to increase output where the machine is set and timed to a point of maximum efficiency and the human factor is subordinate, or where mechanical processes are essential to the completion of the operation. Shortening of the working day to less than 7 or 8 hours does not increase output sufficiently to warrant the change on this basis, except perhaps where speed is solely dependent upon the human factor and the work is of a very heavy character. In practically every instance, it is necessary to allow a period of adjustment before expecting an increase in output to follow a decrease in hours, although in some instances the favorable effect upon production has been almost instantaneous. An increase in the number of hours invariably has an adverse effect upon output, especially if the working day has been 8 hours or more. Moreover, it may be added in this case that the unfavorable effect upon output is immediate and the time lost through unavoidable sickness increases to such a point as to nullify the increase in hours.[1] Finally, psychological conditions appear to be of greater significance than physical conditions in their influence upon output among workers who already enjoy the 7- or 8-hour working day.

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[1] See Florence, P. S., *Economics of Fatigue and Unrest*, pp. 348, 349.

Scientific Management and the Reduction of Hours.—Legal regulation of hours often has a salutary effect upon organization and management, stimulating better and more efficient methods. Careful surveys of methods of work and arrangement of material, thorough examination of machinery and equipment, and critical analysis of processing often follow. In 1919, for example, when the Massachusetts 48-hour law for women became effective, a large number of industrial concerns were compelled to make a careful analysis of their methods and processes to discover wastes and possibilities of improving technical efficiency. There was common testimony to the effect that although the new law had increased the cost of labor, this was compensated by better management and more efficient organization.[1]

Scientific management itself, however, may be the most responsible agency for reducing the number of hours in the working day and the working week. Effective organization of the shop, elimination of wastes in time, motion, and materials, regularization of production and the provision of adequate incentives are a few of the essentials in the larger program of scientific management, which, in the last analysis must be looked upon as the most effective agency for the shortening of the working day and the maintenance of output. It would be presumptuous to predict that the time will come when, because of electrification and improved organization and operation, industry will not need to exact more than a universal 6- or 4-hour day, but confidence in the inventive genius and organizing ability of man has not infrequently prompted far-visioned individuals to indulge in such prophecy. We are not here concerned with the social and moral problems which such an eventuality would entail, nor with the immeasurable potential influence of such a step upon the cultural and spiritual progress of the race. Our own reaction is that a race possessing the mechanical genius to make possible so radical a reduction in the hours of labor would be intellectually capable of so organizing its leisure and educating its desires as to solve successfully the problems that would result from such a revolutionary change.

Overtime Work.—The term "overtime" is commonly used to designate extra hours of employment beyond the normal working period. Overtime is usually justified on one of several grounds, such as a marked shortage of labor, the difficulty and expense of expanding the plant and increasing machinery and equipment, and the occurrence of emergencies. It is admittedly excusable, if not unavoidable, to make use of overtime in unforeseen and unforeseeable circumstances and temporary periods of exceptional production developing from unusual market conditions. Experience, however, has proved that even on such occasions overtime cannot be indulged in excessively with impunity.

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[1] United States Department of Labor, *op. cit.*, pp. 22, 23.

Where workers have an effective voice in determination of conditions of employment or where labor is relatively scarce, overtime is usually paid for at the rate of time and one-half. Under these conditions, the tendency is for workers to miss the normal hours or to slow up production in order to make the better-paid overtime periods necessary. But this is not the only disadvantage. It is likely to impose a too severe strain, physical and mental, upon the workers, which is reflected in poorer quality and lower quantity production during both the regular and overtime periods. Lost time resulting from fatigue and illness tends to increase where excessive overtime is required. Where management deliberately encourages overtime in order to speed up production and pays for it at increased rates, the workers are tempted to work overtime to make up for layoffs during the regular shifts. There is no doubt that overtime interferes unduly with the leisure time required for the enjoyment of home life and other desirable pleasures. The fatigue occasioned by too much overtime tends to increase the desire for artificial stimulants, such as alcoholic drinks, and thus exercises a deleterious influence over the physical, moral, and economic life of the workers. Especially is this evident among groups of workers such as longshoremen, where the very nature of the work makes hours of employment quite irregular. It must not be forgotten, moreover, that overtime is exhausting to straw bosses and other executives who, unlike laborers in the rank and file, cannot take days off to recuperate.[1]

It is difficult to lay down any general rules governing overtime periods. Excessive overtime, however, is not conducive to maximum efficiency and output; the returns to the company are seldom, if ever, proportionate to the added financial outlay. The amount of overtime allowed to any one worker in a single week should be definitely prescribed. The maximum number of hours will naturally depend upon such factors as the character of the occupation, the conditions under which the work is performed, the general working environment, the distance which workers are forced to travel to and from work, and the nature of transportation facilities.

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[1] "Memoranda of the British Health of Munition Workers Committee," *United States Bureau of Labor Statistics, Bulletin*, 230, pp. 46, 47.

Work should be distributed among larger numbers of operatives and a definite system of shifts introduced in order to preclude the necessity for excessive overtime. A system of shifts is always preferable to overtime, because it not only prevents undue strain upon workers and executives but makes for a more complete utilization of machinery and equipment and a more uniform rate of production. Three shifts of 8 hours each, or four shifts of 6 hours each, are more conducive to efficiency than two 10-hour or 12-hour shifts.

Nightwork.—Nightwork has gained a measure of prominence in the modern industrial system in connection with continuous industries, that is, industries in which the nature of the processes makes it necessary to keep machinery and equipment in constant operation. Even in continuous industries the tendency is definitely in the direction of four shifts of 6 hours each, with provision for an automatic change of shift for all workers at stated intervals. Some discussion has taken place with regard to the length of the period any worker should be allowed to remain on the night shift. A weekly change of shifts is common, especially where three or four shifts are in operation; in other cases the change is made fortnightly or monthly; in still other instances, no alternation is provided for, the workers remaining on day- or nightwork permanently, except where temporary changes are made for individual convenience.

There is sharp difference of opinion concerning the relative merits of these systems. Advocates of the weekly change of shift contend that the strain of nightwork and the difficulty of getting adequate sleep during the day make it unwise for workers to remain on the "graveyard" shift for more than a week at a time. Opponents urge that repeated changes make it more difficult to settle down to either kind of shift and that after the first week nightwork becomes less trying while the ability to sleep by day increases. Workers themselves react in various ways to the different systems. This much, however, is certain: Few persons react favorably to nightwork, whether the shift be continuous or alternating. Outside of continuous industries, nightwork can scarcely be justified, and, even in these, it presents serious disadvantages which must be recognized in planning for industrial efficiency, stabilization of the working force, the promotion of industrial good will, and the conservation of the health and vitality of the workers.

Nightwork cannot be regarded as desirable, either from the point of view of the employer or of the wage earner. It is uneconomical unless overhead costs are unusually heavy. Frequently the scale of wages is higher as an inducement to employees to accept employment on the night shift, and the rate of production is generally lower.

> Exact measurements of the output of day workers and night workers on similar jobs show that the latter habitually produce less—2 per cent, 6 per cent, 10 per cent, 12 per cent and 17 per cent in different groups under observation. . . . Of a squad of 74 of these men under the scrutiny of an observer, two-thirds were found sleeping at different times between 3:30 and 6:30 a.m. Operations that required 12 seconds for performance in the evening, when the gang was fresh, now required more than 17 seconds.[1]

Another study showed, however, that under proper conditions the output at night was as high and as uniform as in daywork.[2]

But "proper conditions" seldom exist. For this reason, there is usually an actual difference between production gained throughout the two shifts. Supervision is frequently unsatisfactory on night shifts, since fewer and less-experienced foremen are employed. The working environment is not so conducive to good work because the lighting is artificial. Then, it must be remembered that it is distinctly unphysiological to turn the night into day and deprive the body of the beneficial effects of sunshine. The human organism revolts against this procedure. Added to artificial lighting are reversed and unnatural times of eating, resting, and sleeping. Much of the inferiority of nightwork can doubtless be traced to the failure of the workers to secure proper rest and sleep by day. Because of inability or the lack of opportunity to sleep, nightworkers often spend their days in performing domestic duties, joining the family in the midday meal, "tinkering about the place," watching the baseball game, attending the theater, or taking a ride in the car. It is not strange that nightworkers tend to be less efficient than dayworkers and lose more time. Whether measured in terms of its effect upon attendance, health, or output, the night shift usually compares unfavorably with the day shift. For this reason, paying nightworkers a flat differential rate slightly above the day rate has become common practice in America.

Sunday Labor.—A weekly period of rest, so long defended on purely religious grounds, is now accepted as a sound principle of industrial physiology and fundamental to maximum efficiency and output. Except for quite short periods, continuous work does not react favorably upon production. Both wage earners and executives need a break in the week's work. There is reason to believe that Sunday labor is generally uneconomical. Supervision is difficult and the 7-day week imposes a heavy drain upon the physical resources of the working force. Sunday labor must often be paid for at increased rates, not infrequently double time, which augments the already high cost of operation. Although attendance at Sunday work is usually good because of higher rates of pay, the output per man seldom measures up to that which obtains in the normal workday. Moreover, Sunday labor has an adverse effect upon attendance during the other days of the week, particularly so where extra remuneration has been provided to the extent that the worker will not suffer financially should he lay off for a half or even for a whole day.

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[1] LEE, *op. cit.*, p. 23.

[2] *Cost and Production Handbook*, 1934, p. 542.

Quite apart from economic considerations are the social and religious reasons for the discontinuance of Sunday labor. Socially, the wage earner and the executive need and are entitled to 1 day in 7 to devote to their home life and their families, to escape from the tedium of employment and the smoky air and noise of congested cities, to find the restful recesses of nature, and to relax completely after 5 or 6 days in the rigid regimentation of the factory, office, or store. Religiously, men should be free 1 day a week to attend the more formal observances of the church and to enjoy the inspiration and comfort which even this materialistic and rationalistic age finds indispensable to completeness of life.

Discontinuance of Sunday labor, therefore, should be general and extend to all classes of workers, except in cases where the processes are unavoidably continuous in nature. Even here, there should be some arrangement whereby each laborer could have 1 day of rest in 7. A system of relief workers has sometimes been introduced to accomplish this purpose. Employers are becoming more and more convinced that Sunday labor should be confined to emergencies, including the making up of arrears by certain departments or shops, and to repairs.

Actual practice in this regard varies according to the type of business and the urgency of the work to be done. In some industries, such as baking, Saturday is usually the "day off" since few goods are needed for Sunday purchase; but Sunday labor is required in order to produce Monday's goods. In the building trades, Sunday work is occasionally prohibited or limited to cases of real emergency; otherwise it carries double-time pay. In book and job printing, union contracts allow for Sunday work only under condition of penalty pay, usually double or triple regular pay, while with newspaper printers, where the work is continuous, less severe penalties, if any, are attached. Salaried positions, as a rule, make no financial allowances for Sunday or overtime work. Since offices, banks, stores, and the like usually operate on regular opening- and closing-hour schedules, little if any Sunday or overtime work is supposed to be involved, although many bookkeepers and clerks have to put in extra time in order to complete their duties.

Rest Periods.—In recent years, considerable attention has been given to the question of allowing rest periods or pauses at regular intervals within the work shift. This is the result of a conviction that fixed rest periods have a direct relation to the elimination of fatigue and resultant inefficiency. Industrial experience has proved that rest periods tend to check cumulative fatigue in its latent or initial stages, and to prevent the development of illness which would issue in loss of output and increase of absenteeism. Fatigue is cumulative, and pauses in work give a much needed change.

> The human machine must have change. If it has been sitting, it must stand; if standing, it must sit. It must gossip and laugh and dance and take food and read newspapers—anything that will turn nerve and blood currents into new channels; that will make overactive cells rest and torpid cells active. The English cup of tea might be established in our American factories with profit.[1]

Rest periods are usually from 5 to 15 minutes in length, the 10-minute pause being most common. Ordinarily, one is taken in the middle of the forenoon and one in the middle of the afternoon. The length of the pause and the time and frequency of distribution will depend upon the nature of activities and the conditions of employment. Formal rest periods may not be necessary in those occupations in which the work automatically allows periodic relaxation and relief from nervous strain. An investigation of rest periods in industry made by the National Industrial Conference Board leads to the conclusion that such pauses are essential in occupations which are monotonous in character and require prolonged and intense concentration of attention, enforce continuous sitting or continuous standing posture, involve severe physical exertion, or expose the workers to extreme heat or gases or other unfavorable conditions.[2] While there is no general agreement with regard to the results of rest periods, a large number of employers are convinced that such pauses have contributed to health and efficiency through the provision of opportunities for relaxation and the elimination of irregular pauses which usually cause so much lost time. One study shows, for instance, that during 8,300 hours of work without rest periods, the average personal time lost was 3.6 per cent of the total and the average incidental time lost was 8.7 per cent of the total; whereas during 2,973 working hours where rest periods were maintained the average personal time lost was only 1.8 per cent and the incidental time lost was 5.4 per cent. In general, it is safe to conclude that from 12 to 15 per cent of total time is lost if no rest periods are allowed, but this loss can be greatly lessened by means of breaks in the work schedule.

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[1] LEE, *op. cit.*, p. 11. Also see H. M. Vernon, *Industrial Fatigue and Efficiency*, for a detailed analysis of fatigue.

[2] "Rest Periods for Industrial Workers," *Research Report*, no. 13, January, 1919, p. 9.

Benefits will accrue from rest periods when they are properly administered. The time must not be spent in the midst of noise, dust, and vitiated air in a crowded workroom. Most organizations recognize this and thoroughly ventilate shops and offices with fresh air by opening all doors and windows during the pause; not a few companies provide for complete stoppage of machinery and power in order to eliminate noise and vibration. Although employees are usually free to do as they please at such times, they are encouraged to make use of the rest rooms or engage in some form of relaxing activity. The provision of light lunch is not an uncommon practice. Tea, milk, malted milk, coffee, sandwiches, and sweet chocolate are sold at cost or furnished free of charge. Many workers leave home hurriedly in the morning after a scanty breakfast or none at all. Undernourishment is common, and many firms testify to the favorable effects of a light lunch in the middle of the forenoon and again in the afternoon. A traveling canteen is sometimes used to furnish refreshments while workers remain at their machines, but this does not seem so desirable and beneficial as the custom of allowing employees to leave their work.

The inauguration of rest periods has often been attended with some difficulty. Workers frequently prefer a shorter workday to pauses during the regular shift. Until they discover that rest periods aid production, pieceworkers are inclined to oppose them on the ground that the pauses slow up output and diminish earnings. Some employers oppose rest periods because they fear that such a practice involves undue loss of time through interruption of processes, encourages breaches of discipline on account of the tendency of employees to overstay their time, and affords too much opportunity for workers to get together and talk over their common grievances. These objections have not proved formidable. Left to themselves, most workers take rest pauses at irregular and unsuitable times, so it is better for management to prescribe both the time and the distribution. There is increasing evidence to the effect that pauses are a good investment.

At this juncture, it is well to urge the wisdom of providing adequate time for the noon-hour lunch. The practice of letting the worker snatch a bite whenever he can while the machine is in operation or while he is still on office duty is inexcusable. Self-respecting wage earners will not accept such a condition. At least a half-hour should be allowed for noonday meal, and in some occupations even a longer period may be necessary. Only in this way is it possible to encourage proper habits of eating and relaxation, which are so directly related to proper digestion and nourishment and which, in turn, determine health and productivity.

Holidays and Vacations.—Observance of regular holidays is an indispensable condition of cordial relations between management and employees. The number of holidays usually recognized varies from three to eleven or fifteen per year, banks being among the most generous in their recognition. The United States has been extremely parsimonious in this particular, and its policy is in marked contrast to that of England and other countries where several times a year practically all workers enjoy a holiday of 2 or 3 days' duration. Holidays afford a break in a long period of muscular and mental strain and provide necessary opportunities for rest, change, and recuperation. Thorough investigation has resulted in the conclusion that the workers, refreshed and more vigorous, unconsciously start work on a higher level of speed and maintain that level permanently, whereas reduction of hours unaccompanied by a holiday, that is, by a chance of breaking through settled habits of work, is generally very much slower in bringing about the desired reaction.[1] Moreover, the influence of holidays upon sickness and lost time is favorable.

Holidays also afford a much-needed opportunity for making repairs to office, shop, and machinery, which in the rush of activities often tend to become so defective as to affect output adversely. Nor should it be forgotten that holidays have a beneficial effect upon the executive and supervisory staff. Apropos of this is the comment of the British Health of Munition Workers Committee: "The committee desires specially to emphasize the need for giving periodic holidays to members of the management and to foremen.

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[1] *United States Bureau of Labor Statistics, Bulletin* 249, p. 91.

They cannot take days off like the ordinary workers and cases of temporary breakdown have been regrettably common."[1]

Recent years have witnessed a remarkable change in the attitude of employers toward the practice of granting to office and factory employees an annual vacation with pay. A generation ago, comparatively few concerns gave vacations with pay to unsalaried employees and executives. The period of the great depression caused a marked setback in this development, but, subsequently, new plans have been installed by several large organizations. Today, it is a common practice to include in the vacation plan all those employees who have been in the service of the company for a certain length of time, varying in different establishments from a few months to not more than 2 years. For factory employees on an hourly rate of pay, the usual vacation is 1 week, except when the length of service is less than 1 year, in which case the vacation period is less. It is a general practice to recognize continued service by increasing the length of the vacation, in most cases the period being increased to 2 weeks after employees have been with the company a number of years. Store and office employees are almost always given 2 weeks for their second year of employment.

Some organizations, such as the American Telephone and Telegraph Company, have begun to offer 3 weeks' vacation with pay to all employees with 15 years of service, and 4 weeks for those with 25 years of service or more. Most concerns now granting vacation periods follow the policy of extending the period upon request, but the extended time is usually granted without pay. In order that there may be as little interference with work as possible, it is necessary to adjust the vacations of various employees to the convenience of the establishment. In manufacturing plants which shut down for inventory or repairs, vacations naturally come at these times. Comparatively few establishments close down completely for these purposes, however, so it is customary to arrange for vacations in the period between the middle of June and Labor Day. Some organizations allow employees to take their vacations almost any time during the year.

In addition to a specified period of service, eligibility sometimes depends upon good attendance and punctuality records. Those employees who work on an hourly basis receive the regular wages for the vacation period, and pieceworkers usually receive the average rate of pay for the year. Many companies either directly or through vacation bureaus distribute among their employees information concerning resorts and trips. Where companies maintain summer camps in the country,. the mountains, or at the seaside, employees and their families are often extended the privilege of spending their vacations there. These camps, which are usually equipped to take care of a considerable number of persons, are operated at most reasonable rates, and every facility is provided to make possible a real rest.

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[1] *Ibid.*, p. 92.

Provisions for vacations with pay are frequently made in the agreements concluded between organized workers and their employers, but the conditions and methods of procedure are quite similar to those plans inaugurated independently by employers.

It is practically impossible to measure the results of vacations with pay, but the rapid growth of the practice would seem to indicate that they have a beneficial effect upon the morale and stability of the working force. There can be no doubt that such favored treatment tends to increase the loyalty of employees and to improve their general efficiency.

CHAPTER XXVII

THE PHYSICAL ENVIRONMENT OF WORK

The Importance of Physical Environment.—Geographers have long since emphasized the close relationship that obtains between the external forces of the physical environment and the development of civilization.[1] As in the case of lower forms of life, the progress of the human species is dependent upon successful adaptation to or manipulation of environmental conditions. Both the material and the social advancement of the race are conditioned by the effectiveness with which natural forces are harnessed to meet the constantly expanding needs and desires of the population. Research in the sciences of bacteriology, physiology, and geography has revealed a causal relation between humidity, temperature, rainfall, soil, and topography on the one hand, and health, vitality, efficiency, and development on the other. No explanation of human progress is complete which does not recognize the influence of these forces.

The discoveries of science, however, are not always applied immediately in the organization and administration of business. Nevertheless, the place of employment, hitherto regarded as the sanctum sanctorum of absolute individualism, has gradually yielded to the invasion of science and is now becoming the laboratory of the physiologist and hygienist, whose researches are making available valuable data for the improvement of employment relations. Science often triumphs in the modification of attitudes and practices in industry where reformist agitation and preachment prove futile. Employers are practically minded men compelled by the competitive struggle to scrutinize costs and keep a watchful eye on the balance sheet. If it can be proved that there is a causal relation between the cleanliness of the workshop, humidity, temperature, illumination, and other factors in the working environment on the one hand, and the health, vitality, efficiency and response of employees on the other, the employer will be encouraged to introduce the changes necessary to obtain the best results.

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[1] See, for example, Ellsworth Huntington's *Climate and Civilization*, and *The Pulse of Asia*.

Good Housekeeping in Industry.—Most men and women are sensitive to their environment. A clean, attractive interior, whether it be in a home, an office, or a factory, makes an indelible impression upon those who enter or work there. Conversely, an ill-kept, dirty, and ugly interior has a depressing effect upon the mind. In answer to an oft-repeated inquiry concerning the influence of the physical environment upon their attitude and work, employees have almost unanimously stated that the clean and well-kept establishment develops a sense of appreciation and stimulates a spirit of cheerfulness, and that an ill-kept workroom has the opposite effect. A place of employment that has a neat interior will attract a desirable type of employee. Many manufacturers of foodstuffs command the good will of their customers and increase their volume of sales by advertising the neatness, cleanliness, and sanitation of their factories. There are relatively few offices and factories in which the good will of employees cannot be enlisted in the same way.

Good housekeeping is now an accepted principle of good management, and is an established practice wherever there is a real appreciation of the importance of the human factor. In a large number of older American factories, one still finds an almost total disregard of this principle. Personnel managers who sense the importance of a well-kept shop often have considerable difficulty in enlisting the cooperation of heads of departments in this matter. Dust accumulations, unpainted walls, unwashed windows, undrained floors, uncollected scrap and tools, and unswept passageways are commonly found wherever management is ignorant of or indifferent to the influence of such conditions upon the health, loyalty, and output of employees.

Lighting and Its Effects.—Of all the factors in the physical environment of work, lighting has received the most widespread attention in recent years. This is doubtless due to the apparent relation between proper illumination and efficiency. Scientific studies have yielded unmistakable evidence on this point. The quality of workmanship and quantity of output both suffer when illumination is inadequate, especially if the operations are refined and delicate. Electrical engineers have shown that the rate of output can be increased from 1 to 10 per cent, or more, through the installation of improved lighting systems.[1] In this way, also, effective supervision is made possible. Mistakes and carelessness on the part of new workers are detected more readily, malicious soldiering on the job is less likely to occur, and the discovery of fatigue is much easier. Poor lighting is a primary cause of nervous strain, physical fatigue, and eyestrain with its attendant headaches and loss of efficiency. Industrial and commercial experience has proved that insufficient illumination is a contributory cause of accidents, many of which occur because workers are unable to see obstructions in passageways and moving machine parts, and because stairways and elevator shafts are not properly lighted. Waste of materials and damage to equipment often result from improper lighting, and machines cannot be carefully oiled, cleaned, and repaired under such conditions.

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[1] See *Shop Lighting*, issued by the Industrial Commission of Wisconsin. Of considerable value also are the researches on industrial lighting made by the

Mental attitude has a marked influence upon efficiency, and it is definitely established that employees are more cheerful in well-lighted rooms than in poorly lighted ones. An illustration of this fact was found in a large general office in which the rate of turnover was unusually high and the morale extraordinarily low. In seeking the causes of the situation, the management discovered that desks were so placed as to deprive the employees of the best light. The artificial lighting, which was used only during winter months and on dark days, was so unsatisfactory as to cause eyestrain and irritability. Correction of these conditions soon resulted in decreased labor turnover and improved morale. It must not be forgotten, moreover, that good housekeeping is difficult where insufficient lighting prevails.

Essentials of Proper Lighting.—Careful investigation of the requirements of proper lighting has resulted in fairly definite recommendations. Adequacy is the first essential. Illumination must be sufficient if the health of the worker is to be protected and quality and quantity production assured. There must also be a reasonable degree of constancy and uniformity of illumination over the necessary area of work. A flickering light or one that is brighter outside the area of work or point of operation than within it irritates the worker and lowers his efficiency. Lamps should be so placed that the light from them will not fall directly on the eyes of an operative when he is engaged in the performance of his task or when

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Illuminating Engineering Society (see this organization's *Thirty-First Annual Convention Proceedings*, Sept. 27–30, 1937) and by the Engineering Department of General Electric Company.

he looks horizontally across the workroom. A final essential is that lights should be so placed as to avoid the casting of shadows on the work.[1]

Natural light is the best form of lighting for all kinds of work and should be utilized when obtainable in the proper constant degree. Every effort should be made to admit the maximum amount of light into the interior of the workroom so that even the center shall have its proper share. The distribution of light upon the working planes should be as uniform as possible and fall upon them from the proper direction. The correct placement of desks, machinery, and equipment is indispensable to the achievement of these ends. The least wasteful absorption of light by walls and trim occurs when their color and surface are adapted to this purpose, white or other soft, light colors being preferable. Roof lighting is better than lateral lighting, but since the former is possible only in one-story buildings, or on top stories of others, lateral lighting is usually necessary, in which case window space should be as large as possible. The ratio of window space to floor area should be as large as possible. The ratio of floor area to window space will vary with the nature of the work to be done and the quantity of direct light which the location of the establishment will admit into the interior, but this is a matter that must be given careful attention in the construction of the workplace. Excessive daylight is as undesirable as an insufficient amount, if it is glaring and strains the eyes of workers. Proper distribution of light is often obtained by means of roughened, ribbed, or prismatic glass window panes. These are necessary where surrounding tall buildings shut out much of the direct light from the sky and the daylight strikes the windows at an oblique angle, with the consequence that there is a concentration of light in a narrow band near the windows and the absence of it in the center of the room.

Although desirable, natural light is not without its disadvantages. It is never entirely uniform, since both its quantity and quality are dependent upon the seasons, time of day, and conditions of weather. Moreover, it is sometimes very hard to increase the amount of light available for local areas and special operations in the factory when greater intensity is required. Control of the reflection of natural light from various surfaces outside and inside the establishment is difficult. The operation of workshops during winter months and at night adds to these other conditions in making artificial lighting necessary in some measure.

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[1] British Health of Munition Workers Committee, "Final Report on Industrial Health and Efficiency," *United States Bureau of Labor Statistics, Bulletin* 249, p. 183.

It is well to remember that the best utilization of natural light depends upon good housekeeping. Windows should be kept clean both on the outer and the inner surfaces. Dirty windows hinder daylight from entering the workroom; consequently the daylight period is shortened somewhat, and needless expenditure for artificial lighting is incurred. Care should be taken, therefore, to see that in the construction of workplaces windows are made easily accessible for cleaning.

Artificial Illumination.—Because modern industries are operated during a considerable time when natural lighting is impossible, efficiency and economy require proper standards of artificial illumination. In every case, the quality of artificial light should approach as nearly as possible that of sunlight. The intensity will, of course, vary with at least four conditions, namely, the nature of the business, the type of operation, the character of materials worked on, and the environment of the establishment. The color of the light should approximate that of daylight, diffusion should be so uniform as to avoid dark spots and shadows, glare should be eliminated, and as few impurities as possible should be discharged. Remarkable developments have been made in this field, especially in indirect lighting technique for the office and in mercury arc, or the combination mercury and incandescent lights, for shop and mill.

The test of efficiency in any lighting system is the ability of the worker to do his work safely and well. Industrial experience has shown that the supply and quality of light may be adequate but the good effects entirely neutralized by bad distribution, that is, by having the light fall improperly upon the work. Lights should be placed above the heads of workers so that all parts of the room are illuminated and so that they do not shine in the eyes of employees, even when standing in an upright position. Carefully shaded individual lights are necessary for fine and delicate operations, such as close desk work, drafting, and fine hand or machine work. Glare is equivalent to too much light, and its absence is a condition of efficiency and safety. The accommodation of the eyes to a bright light means temporary blindness when the worker turns away from it. It is at such times that workers run into projections or fall into unguarded shafts or stumble over obstructions in passageways. A master mechanic in a Western plant remarked that his punch-press department was a veritable graveyard until the company installed an adequate system of lighting which eliminated glares and other deficiencies. In this case, as in so many others, an ideal situation resulted from the provision of illumination of correct intensity uniformly distributed over the field of vision, with no extremes or surface brightness. Visual acuity is best when the brightness of surroundings is about equal to that upon which vision is centered. The requirements of effective artificial lighting, then, are adequacy, proper diffusion, and the elimination of glare.

Three types of lighting are commonly found in American establishments, namely, direct, semidirect, and indirect. The direct type of lighting has the advantages of low cost of installation and maintenance, economical distribution of lamps, and little loss by absorption. Its disadvantages consist in a tendency to excessive illumination of work and the consequent sharply contrasted dark areas around the work. In semidirect lighting systems, the brightness of the bowls is reduced considerably. This type of lighting meets certain needs. A reduction of glare and good diffusion result when the reflectors are of dense glass or similar material, highly polished inside in order to give about the same brightness for equal area as the reflecting ceiling. In indirect systems, the source of light is hidden and all illumination comes from ceiling reflections. Glare is reduced to a minimum, shadows are practically abolished, and the greatest possible amount of diffusion is achieved. For work which requires reading, fatigue is much slower under the indirect system than under the other two, so the indirect light is generally accepted as best for office work. Its use in other employments, especially in industrial plants, is still of somewhat doubtful value, and direct or semidirect systems are commonly used.

In any lighting system, the proper placement of lights, desks, files, machines, workbenches, and equipment is indispensable. Improperly located lights will produce glare and often result in high lights and deep shadows. Machines and workbenches should be so placed as to obtain the best results of natural and artificial lighting. Office desks should not be placed so that the clerk or typist is required to face windows or other sources of bright lights. Efficient maintenance of lighting is no less essential than proper placement. Lighting equipment depreciates rapidly if not cared for. The accumulation of dust and grime soon lowers the efficiency of the best illuminating system.

The Comparative Merits of Natural and Artificial Lighting.—Considerable attention is being given to the comparative advantages of natural and artificial lighting, and marked difference of opinion obtains. The prevailing judgment has been expressed by a special investigator:

> It has to a great degree been taken for granted that daylight supplied the best illumination, and up to the present time this is probably true, where it is of proper intensity and properly controlled, for the diffusion is more easily secured, the limits of comfortable intensity are much wider apart, and fatigue is much slower in developing than with most artificial lighting. This may not continue to be, when lighting practices develop efficiency; and the perfect uniformity, obtainable only with artificial means not influenced by weather changes, may bring a sufficient advantage to make it the superior form. Certainly daylight is cheaper and will continue to be so for a long time.[1]

Two significant developments have made their appearance within the past 5 years, one favoring natural illumination, and the other, artificial. The advantages of natural lighting have been greatly strengthened by the introduction of the glass block or glass brick in building construction. The Standard Register Company, the Owens-Illinois Glass Company, and numerous other industrial companies throughout the country have been utilizing this new construction material consisting of a glazed glass block usually about twice the size of an ordinary clay brick. By means of this material, it has become possible to build offices and factories with solid walls of glass blocks, or with varying thicknesses of horizontal or vertical panels of glass brick, thus admitting abundant glareless daylight along the entire length or height of walls as needed. Offices utilizing this new principle usually equip glass-block walls with heavy ceiling height curtains which can be drawn so as to give the required amount of natural light. When this type of construction takes the place of all windows, air conditioning is required; otherwise it is used to supplement the regular modern window paneling.

The other development, windowless buildings and offices, is perhaps even more revolutionary. The building without windows is engineering's answer to employers' demand for increased efficiency and maximum utilization of plant and office facilities. The Hershey Chocolate Company recently completed a modern office building which does not contain a single window. The building is excellently illuminated by means of semidirect and indirect artificial lighting always maintained at constant intensities depending upon the requirements of each office worker. It is air conditioned; thus, the temperature is artificially controlled at the point of maximum human efficiency. In fact, all the latest improvements in construction have been applied, even to the point of having automatic weather signal devices installed in each major division of the building. By means of these devices it is reported that the office secretary or clerk can glance up at the wall before leaving work for the day to observe the different colored electric lights which indicate climatic conditions outside so that the umbrella or rain coat can be taken from the hanger if it is raining. Speaking of this new development, an executive of a large construction company states:[1]

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[1] FOWLER, E. B., *Report of the Federated American Engineering Societies on Waste in Industry*, pp. 389, 390.

> With the controlled conditions that can be maintained inside the windowless plant the usual objection to multiple shift operation can be disposed of, since top efficiency is possible 24 hours a day. By scheduling two 8-hour shifts or three 6-hour shifts in such a plant, a manufacturer can get along with 60 per cent of the floor space, equipment, and capital required where production is on a single 8-hour shift.
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> Sound control, through the application of acoustics, facilitates concentration on the work at hand. Air conditioning attains maximum efficiency in the absence of all exterior openings and with protective insulation which resists all outside thermal influences. The net result of uniform humidity, constant temperature, and purity of air raises the level of performance materially and is of direct assistance in maintaining uniform quality of product at all times. It is interesting to note in some plants production per employee varies as much as 15 per cent with a 7 per cent change in temperature.

Inasmuch as this type of building necessitates the manufacture of artificial air, light, and temperature, certain costs are bound to be higher than those in the conventional type. But there are certain distinct advantages. The air is clean and fresh, dust and dirt are not present to soil the walls and slow down the speed of the workers, and temperature is maintained at constant levels. There are no windows to keep clean. Finally, the health and welfare of the employees are promoted, and the quality of production is substantially improved.

Cost and Advantages of Proper Illumination.—The cost of installing a proper system of illumination is not such as to excuse any firm for retaining an inadequate one. It has been estimated that the expense of providing an adequate system of lighting for the entire industry of the United States would not exceed 0.5 per cent of wages. Yet, a survey made by the Industrial Lighting Committee of the National Electric Light Association and characterized at the time as typical of American conditions in general, indicated that of 390 industrial establishments studied[1] 56 per cent were poorly lighted, 29 per cent fairly lighted, and 15 per cent well lighted. The small establishment appears to be the chief obstacle to progress, the indefensible excuse being offered that the cost of installation of proper lighting is prohibitive. This explains why it is necessary for the community through law to prescribe the basic requirements of proper lighting, in order to protect the health and welfare of the workers.

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[1] Low, Albert S., "What's What in Plant Design," *Factory Management and Maintenance*, vol. 95, April, 1937, p. 58.

Even from a monetary standpoint, adequate lighting pays. Accident data prove conclusively that deficient illumination is directly related to accident frequency and severity rates. A study made in 1910 showed 23.8 per cent of the 91,000 industrial accidents covered were due to lighting conditions. Recent estimates indicate that progress in this field has reduced this percentage to 15 or less. Evidence further shows that the greatest percentage of accidents occurs during the winter months and the portions of the day when it is necessary to use artificial lighting. A study of more than 650,000 industrial accidents reported to the Pennsylvania Department of Labor and Industry for the years 1921–1924 showed that 24,000 more accidents occurred during the winter months than during the summer months, and that 400 more fatal accidents occurred in the former period. Although considerable progress has been made since this time, it is apparent that output can be increased and spoilage reduced by proper illumination. A reorganization of the lighting facilities of the Oshkosh Overall Company in 1937 greatly reduced fatigue, decreased costly mistakes, reduced accidents, and led to lower labor turnover rates.[2] Some experts declare that good lighting will increase output as much as 15 per cent, reduce spoilage 25 per cent, and eliminate 25 per cent of the accidents in any establishment, regardless of the nature of its processes or products or the type of worker employed. The nature and comparative merits of proper and improper lighting systems may be summarized roughly as outlined in Fig. 32.

[1] SPICER, JOHN S., "Industrial Lighting as a Safety Measure," *Annals of the American Academy of Political and Social Science*, vol. 123, no. 212, January, 1926, p. 175.

[2] ANDREWS, J. F., "Sixty Foot Candles Mean Real Seeing," *Factory Management and Maintenance*, vol. 95, March, 1937, p. 57.

NATURE AND COMPARATIVE MERITS OF IMPROPER AND PROPER ILLUMINATION

IMPROPER ILLUMINATION

Excessive or insufficient quantity and poor quality	Inability to discern objects	Loss in quantity production
Bad diffusion, that is concentration, high lights and shadows	Inability to discriminate and differentiate	Poor quality of workmanship
Glare, comprising bad reflection and direct intensity	Impaired eye efficiency; eye fatigue	High accident frequency and severity rates
	Irritability, discomfort and discontent	General nervous disability and physical incapacity
	Bad housekeeping	Loss of good will
		Increased labor turnover

PROPER ILLUMINATION

Adequacy, consisting of sufficient quantity and proper quality	Ability to discern objects and details	Greater quantity of output
Proper diffusion, involving the absence of high lights and shadows	Ability to discriminate and differentiate	Better quality production
		Decreased accident rates
	Absence of eyestrain	
Absence of glare, comprising the elimination of brightness and deleterious direct reflections		Protected eyesight
	Good housekeeping possible	Increased good will
	Sustained interest attention and efficiency	Reduction of labor turnover
	Less mistakes, wastage and spoilage	Better supervision of employees
	Less irritability and unrest	

FIG. 32.

Heat and Ventilation.—Although they have desirable standards of lighting, many factories and offices have low productivity because of poor heating and ventilating facilities. The importance of air conditions in manufacturing processes, especially in such industries as textile manufacture, has long been recognized, but it is only within comparatively recent years that serious attention has been given to the effect of air upon the health and output of industrial workers. The sciences of physiology and ventilation have proved conclusively that the worker's capacity depends upon health and comfort and these in turn upon good air. The need for attention to this fact is greatly intensified where the number of employees is large, hours of work long, and the workplace occupied continuously day and night. Under such circumstances, there is no interval in which natural ventilation can restore a vitiated atmosphere, and unless corrective steps are taken, each shift of employees falls heir to the bad conditions left by its predecessor. This is why modern air conditioning and methods of forced ventilation are making such rapid strides in both office and factory.

The qualities which good air possesses are intimately related to efficient functioning of the human machine. The air of a workplace may be rendered impure by several conditions. Poisonous chemical substances produced in certain manufacturing processes cannot be breathed continually without causing physical injury to the workers and consequent loss of efficiency. Particles of dust or filings often result from processing activities. Carbonic acid gas is given off in the breath of human beings and by fires, gaslights, and other forms of open combustion. Various ill-defined volatile substances arising from human beings, from the skin and alimentary canal, especially when personal cleanliness is deficient, are a source of contamination. Bacteria arising from human beings are generally recognized as directly harmful. Colds, sore throat, influenza, and similar diseases spread from infected individuals to their neighbors, and even more serious diseases are disseminated in the same way. Little imagination is required to comprehend the effects of these factors upon the physical capacity and economic productivity of the workers.

While the importance of the foregoing factors in health and efficiency must not be minimized, evidence is accumulating to the effect that equally deleterious consequences may result from bad conditions of temperature and humidity. Air which is pure from a chemical point of view may provide an atmosphere of a most depressing and debilitating character, highly detrimental to physical efficiency. A workshop may have so large a cubic capacity in relation to the number of employees and the nature of the operations that it does not appear to require any definite system of ventilation, but, even in the larger establishments, one often finds a stagnant atmosphere.

Indifference to ventilation is surprisingly common. In an American automobile factory, sixty-eight departments were found to have undesirable physical conditions. The records indicated that the requests of workers for transfers from one job to another were numerous and that turnover was greatest in operations characterized by heat, smoke, fumes and other features of bad air. The number of daily absences from work in these departments was extraordinary, being exceeded only where operations involved excessive noise. Numerous cases of headache were reported to the company's hospital. In another plant, 27 per cent of the employees were ill during each of the first two winters after the buildings were constructed. A change in the ventilation system reduced this to less than 7 per cent. Similar investigations in other industries show that absenteeism and labor turnover are exceptionally high where ventilation is poor.

The average employer understands as little about the human machines working under his direction as he does about the intricate mechanism of his own automobile, the efficiency of which depends partly upon a cooling process. "The human motor, like other motors," an American industrial physiologist has stated, "generates much heat, and must be continually air-cooled if its temperature is not to rise to a detrimental degree."[1] Exposure to air of a high degree of humidity and a high degree of temperature is debilitating. Improper humidity also lessens the appetite and slows down the mental processes.

Good ventilation seeks to provide air which is pure and clean and an atmosphere which is stimulating and refreshing. Cool air in gentle motion is more stimulating than warm air and is more conducive to physical effort. Damp air is more relaxing than dry air at the same temperature. These facts have been fully sustained by direct experimentation in the laboratory. The effect of hot or cold, fresh or stale air on bodily condition and economic efficiency has been measured accurately. In various industries and occupations, there is a middle range of temperature most conducive to efficiency, and temperatures varying either above or below this range are found to have a definite relation to increased accidents and loss of efficiency.

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[1] LEE, F. S., "The Physiologist in Industry," *Bulletin, of the New York Industrial Commission*, vol. 3, October, 1923, p. 11.

Although there is a fair degree of agreement with regard to proper temperatures and humidity, the best temperature will depend upon the nature of the work and the habits of the workers. Sedentary workers will require a warmer atmosphere than those engaged in tasks requiring physical exertion. Although 68 degrees seems to produce the maximum efficiency, a comparatively high standard of performance can be maintained in purely mental work in a temperature as high as 75 degrees. Similarly, it has been found that a combination of mental and physical effort, such as typewriting and typical office work, can be performed 6.3 per cent more efficiently at 68 degrees than at 75. Hard physical labor, such as the lifting of heavy materials, may be done 15 per cent more efficiently at 68 degrees than at 75, and 37 per cent more efficiently than at 86 degrees. In general, the desirable temperature will vary from 60 to 65 degrees for work involving much physical effort and from 68 to 70 degrees for other employment.[1] In some cases it has been found that the most desirable relative humidity of a workroom is 55 to 65 per cent, with the air changed three times an hour. Humidity cannot be increased continually without deleterious effects. Much of the discomfort of summer temperatures is the result of high humidity, and 70 per cent humidity is probably the maximum to which air should be allowed to rise.

The air of a workroom, then, should be cool rather than hot, dry rather than damp, variable rather than uniform in temperature, and moving rather than still. Cubic capacity must be adequate,[2] contacts with outside air must be established, and a system of hoods and exhausts installed to deal with impurities, dust, smoke, and heated fumes given off in the processes of manufacture. In heating any establishment, a combination of indirect radiation and air conditioning is usually sought. Any system for pumping in hot air which does not at the same time include apparatus for circulating and cleansing the air and regulating humidity is inexcusable because it produces a dry, monotonous, and depressing atmosphere.

Even complete installations for air conditioning may be rendered ineffective by failure to provide proper control. Rapid changes of weather during the day, varying conditions of use, and the nature of occupations are among the factors requiring intelligent control.

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[1] Fahrenheit is indicated throughout this discussion.

[2] The usual recommendation is approximately 3,000 cubic feet of air per person per hour.

Frequently nobody is made responsible for the regulation of heat and ventilation, with the result that when windows are opened some sensitive worker immediately closes them. It is a common practice to throw open windows in every department during rest periods when employees are moving about and are less susceptible to drafts. From the standpoint of comfort and efficiency, it is not so much a question of the quantity of air that enters or leaves the room or its oxygen content as it is a question of temperature. Thermometers should be installed in order that the person in control of ventilation may open the windows when the temperature exceeds about 68 degrees; or better yet, automatic thermostatic controls should be provided for all working rooms. Best of all ventilating methods, of course, is the modern air-conditioning system such as that installed in the Hershey windowless building whereby both air quality and temperature are constantly maintained at most efficient levels. This equipment is being extensively used in offices and already has been introduced into a number of plants throughout the country.[1]

Noise, Vibration, and Rhythm.—The effect of noise on health and efficiency of the worker is as yet largely a matter of conjecture; the evidence from tests and experiments is not conclusive. Many consider that noise issuing from machines in factories and typewriters in offices is a real hazard to working capacity. It is definitely known that employment in the midst of machines and mechanical operations causes deafening and that varied sounds which shock the auditory nerves produce a feeling of sensory fatigue. This is why deafness is so common among boilermakers. Although sensory fatigue attacks a single organ, it extends little by little to the whole nervous system, leading often to such a feeling of weariness as to impair capacity for work in an even greater degree than does severe muscular strain.

It is often stated that the worker, even in the boilermaking shop where compressed-air or electrically driven hammers are employed, is oblivious to the deafening noises which the casual visitor to the shop finds distressing. From this it is deduced that noises do not have a serious effect upon the worker. One might appropriately ask, however, whether, under such circumstances, the worker may not be using up great quantities of energy in maintaining his state of oblivion, which otherwise would be expended in productive purposes.

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[1] For good illustrations of modern trends in industrial ventilation and lighting, see *Factory Management and Maintenance*, vol. 95, September, 1937, pp. 83, 88.

Vibration is regarded by many as more disturbing than noise, especially in its effect upon the nervous system of female workers. The elimination of noise from modern machine industries is hardly possible, although much can be done by the use of rubber, linoleum, and other sound-deadening materials as floor covering and as the base for machines. Much of the vibration in the modern machine room, however, can be eliminated by providing solid foundations for machines, such as reinforced concrete, rubber mats, and ground-cork mats. In cases where vibrations are present in a factory or shop directly adjacent to an office, it is often advantageous to "float" the surfaces of dividing walls by the use of metal springs or to "insulate" the surfaces in order to muffle the vibrating sounds.

The problem of rhythm and rest has commanded considerable attention in recent years, largely because of the recognized relation between an action and the recovery from it in pause or rest. There must be proper balance between action and rest if fatigue is to be avoided and maximum efficiency assured. Rhythmic conditions are imposed upon the modern worker through hours of labor, speed of machinery, the pace of fellow workers, and other factors. "If these industrial rhythms are faster than the natural rhythms of the body, they must produce accumulated fatigue and cause an increasing debit, shown in diminished capacity for work."[1] In the interest of health and efficiency, therefore, the maximal efficiency rhythms for the various parts and faculties of the human machine must be ascertained and proper coordination of human factors and mechanical factors established. So little is yet known about the fundamental elements of rhythm and rest that practically nothing has been accomplished toward a solution, but the nature of the problem is fairly clear. Rhythm makes work easier as well as more enjoyable, because each effort is followed by a corresponding rest. The worker is physiologically attuned to rhythm; it is his biological heritage. The natural balance of exertion and repose which exists in the human organism, however, is destroyed when men and women are put into factories where the speeded up machine dominates the human organism and sets the pace which the operative must follow. In her study of this problem, Josephine Goldmark observed:

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[1] British Health of Munition Workers Committee, *op. cit.*, pp. 36, 37.

> Not only is the beat of the machine much more rapid and regular than the more elastic human rhythms, it is often wholly lost in the chaos of different rhythms of the various machines, belts and pulleys in one workroom. The roar and vibration of the machinery tend further to distract sense of rhythm on the part of the worker.[1]

It would seem, therefore, that if proper adjustment is made between worker and machine, fatigue need not occur.

Posture and Seating.—The problem of proper posture and seating while at work immediately recalls to mind the operators of drill presses in the old machine shop in which no seats were provided or allowed, with the result that after years of service these men found themselves with curved spines and bent forms. Similar conditions existed in the cashiers' rooms of a large department store in which the stools were so rickety and so generally unsatisfactory that many of the girls preferred to stand all day at their desks in making change rather than to experience the greater discomfort and inconvenience of sitting down. These were not isolated cases. Neither science nor common sense characterized the management of men and women in those days. Even yet, it can hardly be said that there is general recognition of the relation of good posture to the worker's health and efficiency, despite the fact that such conditions as constant standing and constant sitting or poorly adjusted chairs cause unnecessary fatigue and greatly impair the health and efficiency of workers.

Employers fear that the privilege of using chairs while at work will be abused, but this fear is not supported by experience. The object of providing seats is not to make possible constant sitting, because sedentary life has its own disadvantages, but rather to provide for varying the position where the nature of the work requires prolonged standing. Many operations can be performed just as well sitting as standing, and in every job, pauses are required for adjustment of equipment, slight repairs, and assembling of materials. The intervals between spells of work should be times of real rest and recuperation, and, in order to get the best results, it is often necessary to allow the use of seats. Witness, for instance, the alternate standing and sitting positions of street railway motormen.

Chairs should be adjustable to meet the needs of individual workers. Back rests are essential for the support of the spine at the proper place. The "small of the back" requires support because this is the weakest part. Here strain and fatigue are felt soonest and here also the greatest degree of outward curving occurs when the individual bends forward. It is of material advantage to provide a back with a slight resiliency which gives with the weight of the operative's body. Because it fulfills the requirements of comfort and durability, the chair with the wooden back and seat upon a metal frame has wide usage in industry. Foot rests should be attached to the floor or the workbench, but when this is impossible they should be attached to the chair. A proper foot rest is necessary; it is not possible to maintain an erect posture for any length of time with feet dangling or wrapped around the rungs of a chair.

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[1] *Fatigue and Efficiency*, pp. 81, 82.

Proper relation must always be maintained between the worker and his work, that is, between the operative and his equipment and supplies. Supplies should be within comfortable reach of the worker while properly seated. Reaching produces unnecessary fatigue, and is wasteful to the employer because it uses up energy which otherwise would be given to production. Where side-reaching is required to get supplies, a chair with a part swivel may be used to advantage in some types of work. One finds a surprising amount of side-reaching in offices and factories, with no attempt to reduce the muscular strain or facilitate the worker's action. Chairs used in relation to machines or desks, should be so placed that operations do not necessitate a strained attitude. Another important condition is that the construction and height of the workbench shall be such as to allow room beneath for the knees or feet without interference of cross bars or supports of any kind.

The so-called "sitting-standing principle" represents the best arrangement for factory work, as it does for almost any kind of employment. Constant standing is harmful; it is unnecessarily tiring and injurious. Constant sitting, however, is just as bad. It results in sluggish circulation, constipation, and fatigue. Variation in posture diminishes fatigue and enhances efficiency, because it stimulates circulation. The sitting-standing principle has been applied by making workbenches of a standing height and adapting chairs to that height, and also by the use of collapsible work tables that are adjusted to both a sitting and a standing position.

Excessive Muscular Strain.—Especially in the case of women and young persons, there is a great need of careful supervision of the lifting of heavy weights and the performance of analogous operations which involve sudden or heavy muscular effort. Such persons are admittedly weaker physically than adult males. Experience has shown that sprains are from 47 to 83 per cent more numerous among women than among men in the same factory and that the general ratio is 3:1. The danger of internal injuries to women from the lifting of heavy weights is a matter of grave social importance, in view of woman's peculiarly intimate relation to the physical well-being of future generations. No general rule can be laid down, because so much depends on individual cases. The position in which the weight to be lifted lies, the shape of the burden, the manner of carrying it, and the place to which it is to be carried are all important factors. In no case, however, should either male or female workers be allowed to lift, carry, or move anything so heavy as to injure them. Attention should always be given to the adaptation of the size and shape of the burden; to the provision of labor-saving devices, such as overhead cranes and inclined planes, long handles, and other methods of minimizing strain; to instruction in the knack of lifting weights; to limitation of hours of employment; and to careful selection and placement.

Clothing.—Protective clothing is necessary where a danger to health and life exists on account of such things as dust and dirt, acid burns, hazardous machinery, climbing, and exposure to excessive heat or inclement weather. Yet, it has been extraordinarily difficult to induce women workers to substitute sensible garments, such as overalls, for the usual feminine attire. In recent years, however, better judgment has tended to prevail. The nature and texture of the protective clothing will be determined by the character of the work, the place of employment, and other factors entering into the environment of the job. Many firms furnish uniforms and other work clothing without charge. This is the custom, for instance, in the food manufacturing industries, where practically all women workers are supplied caps and aprons each day and men are furnished with khaki or white uniforms. Electrical workers who need rubber coats, boots, gloves, and other protective apparel are provided them by the company. In most of our manufacturing establishments, where such things are necessary, goggles, respirators, and other safety devices are commonly furnished the employee without charge or at wholesale rates. In the employment of women salespeople in many department stores, laundries, hospitals, cafés, and the like, the type of wearing apparel is usually prescribed, and in some cases the uniforms are furnished outright.

Drinking Water.—In the promotion of health and comfort among employees, an abundant supply of cool, pure water for drinking must be given an important place. Economy of time results where such facilities are easily accessible to all workers. Although water from city mains or special wells is generally used, it is often filtered or otherwise purified. By one system or another, many companies cool the water. In some plants, artificial cooling is used only in the summer months or in certain departments of the plant, but, in not a few cases, tea, oatmeal water, or some other substitute for iced water is supplied to men engaged in overheating work.

In the United States, drinking water is often supplied to employees by means of fountains, which in actual practice may mean anything in the nature of a fixture having a nozzle instead of a faucet. With the wide adoption of the so-called "sanitary" drinking fountain, there has been a marked tendency to install such appliances without proper regard for the most desirable type. As a result, one commonly finds types from which persons may drink by taking the nozzle in their mouths and many others in the use of which the water falls back from the lips of the drinker onto the bubbler at the point of outlet. Such types are decidedly unsanitary. The remedy is found in constructing fountains so that the water will discharge at an angle rather than vertically, in order to prevent the drinker from touching the nozzle. This is essential to preclude the transmission of disease. In any event, the hearty cooperation of employees will be necessary in order to assure proper use of drinking facilities.

In spite of the researches of modern medical and sanitary sciences, the antiquated bucket and dipper are still found in a number of establishments, and the old community tin cup still hangs alongside the faucet in many factories. Among construction gangs, especially, these survivals of a less intelligent and less sanitary age prevail. In offices, however, one usually finds purified bottled water and paper cups furnished free to all employees.

Washing and Bathing Facilities.—It is a common practice among American manufacturers to provide washrooms and shower baths for the use of employees, and experience shows that fully 80 per cent of the workers make use of such facilities. Washing accommodations are especially urgent where workers are engaged in processes in which poisonous materials or substances are manipulated or where heat, dust, or dirt are present in an unusual degree. The relation of cleanliness to good health, self-respect, and efficiency is well established, and it is for the accomplishment of these ends that many employers provide and encourage the use of washing facilities. The initial inertia of employees in using such accommodations is gradually overcome, and appreciation often displaces conspicuous indifference. The need for baths is intensified by the limited facilities for washing available in the homes and lodging places of many workers.

The nature of the accommodations will vary with the needs of particular establishments. Bowls and basins should be installed only if the company is willing to provide ample janitor service for proper care and upkeep. Equipment should always be so constructed as to be easily kept clean and drained and to provide hot and cold water as desired. The floors of washrooms should be smooth, hard, impervious, and rightly sloped to afford good drainage. Washrooms should be so located as to be readily accessible; they should be well lighted, thoroughly ventilated, and kept at reasonable temperature. They should accommodate the greatest possible number of employees in the shortest possible time, and should be strong and durable to withstand hard wear and tear. An adequate supply of soap and towels is indispensable; the individual linen or paper towel is preferable to the commonly found roller towel. Showers are also provided in many factories where manufacturing conditions make them desirable. In the supervision and effective use of such facilities, the cooperation of employees has been enlisted through a special committee representing them.

Regulations governing the use and operation of washing facilities and baths vary. The general tendency is to furnish such accommodations free, together with soap and towels. In a few cases, however, the company requires a small deposit which is returned when the employee leaves its service, or a small charge is made for towels to cover the cost of laundering. The use of the washroom on company time is common. The practice in the United States varies from that of stores, where employees make use of washrooms at any hour of the day, to that of mills and shops, which allow the men in certain departments to quit work from 5 to 15 minutes earlier than the regular closing time in order to bathe and change clothing. It is a common practice to allow men from 30 to 40 minutes a week for the use of shower baths.

Well-equipped and conveniently located locker rooms are becoming increasingly common in both mercantile and industrial establishments. An effort is generally made to provide a locker for each employee and to furnish ample space for changing clothes. It is frequently necessary to provide facilities for the drying of wet clothes in bad weather as well as clothes worn at certain processes. Every precaution must be taken to keep cloakrooms and lockers clean and to provide easy and frequent ventilation. Moreover, in order to prevent petty pilfering and theft, it is necessary to place such facilities under the supervision of an attendant.

Fire Protection.—The working environment is not up to a desirable standard unless the building is fireproof. In all establishments, there should be adequate exits and stairways; each floor should be an isolated fire unit; all interior openings to elevators, stairways, or air shafts should be protected by fireproof doors or shutters; and fire escapes should not pass openings through which flames can issue directly from the floor. Buildings may be of fireproof construction yet still dangerous if easily combustible dust is allowed to accumulate or if inflammable waste material is left exposed to the air. Mechanical dust collectors are frequently needed, and it is especially important that rooms and passageways be cleaned daily. Some companies make it a practice to have all beams, girders, and machinery cleaned during each holiday. Iron boxes with airtight lids should be provided for oily rags and waste, and in each room receptacles for rubbish should be supplied.

In spite of all precautions fires will occur, fully 80 per cent of which are the result of carelessness. Quick discovery and extinction of so-called "unavoidable" fires is imperative. This suggests the importance of having responsible watchmen, a system of fire alarms, fire extinguishers, and an automatic fire-sprinkler system. The primary cause of accidents during fires is confusion which results in a panic. For this reason systematic fire drill is essential. Since constant vigilance is always the price of safety, it is necessary to provide for frequent inspection of the plant. Only in this way can potential fire hazards be discovered and eliminated.

CHAPTER XXVIII

THE STABILIZATION OF EMPLOYMENT

The Unemployment Problem.—Perhaps at no other time in the history of civilization have the peoples of the world been more conscious of the ravages of unemployment than at present. In the United States, the need for some safeguard against the misfortunes of unemployment has been apparent for many years. It was most vivid during 1932 and 1933 when no less than 13,000,000 nonagricultural American wage earners (one-third of all nonagricultural gainful workers in the nation) were out of work.[1] Even prior to this period, unemployment was a serious problem. In 1897, some 18 per cent of those gainfully employed in manufacturing, mining, transportation, and building trades were unemployed; in 1904, 10 per cent of these workers were without work; in 1908, 16 per cent were so classified; in 1914, 16 per cent; and in 1921, 23 per cent were unemployed.[2]

Unemployment is more than a depression problem. It is one that haunts the workers of practically every organization during all times, though it is more keenly felt during some times than others. The best estimates available indicate that in no year since the turn of the twentieth century has the number of unemployed workers fallen below 5 per cent of the total gainfully employed.[3] Seven years prior to 1929, the average unemployed among our industrial workers was approximately 8 per cent of the total.[4] The loss of opportunity to work, with its resultant loss of income and degradation of the standard of living, is a specter which haunts the modern wage earner and his dependents with no less distressing fear than those risks of health and life which constitute a part of the price he pays every day for the privilege of toiling. In the words of a former secretary of labor, "Nothing worries a working man so much as that ever-present dread of losing his job; that ever-haunting fear of a layoff for an indefinite period, which may come, and generally does come, right at the time when he is least prepared or able to stand it."[1] The thing that the average wage earner wants most of all material things is the right to work and the opportunity to work as long as he so desires.

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[1] Social Security Board, "Social Security in America," *Publication* no. 20, 1937, p. 58.

[2] See *ibid.*, p. 58, estimates made by Paul Douglas.

[3] *Ibid.*

[4] Report to the President of the Committee on Economic Security, 1935, p. 1.

Those familiar with the life of the wage earner know that he tends to develop an astonishing indifference to occupational hazards and seems able to forget the pain and inconvenience of occasional accidents. Indifference to an existence frequently discommoded by unemployment with complete loss of income and no compensation is not easily acquired.

This stubborn persistence of irregular work under modern capitalism is responsible for the widespread conception that unemployment is inevitable under a competitive industrialism and that it cannot be eliminated without complete economic reorganization. One does not have to subscribe to this belief to admit that our economic system has been woefully deficient in this particular. Despite its unprecedented contribution to the improved status of the laboring population, capitalism certainly cannot claim that it has provided increasing security of employment. Wretched as were the conditions of work and life for the slave, it was to the economic advantage of his master to provide continuity of employment and subsistence; limited as was the life and freedom of the medieval serf, he was at least assured of subsistence and could not be divorced from the soil which yielded him a livelihood. But the modern wage earner, with his boasted freedom and the remarkable elevation in his political and industrial status, has no assurance of uninterrupted access to work and hence has no assurance of the continuance of his means of subsistence. All of this is a sad commentary on the efficacy of modern industrialism.

Recent studies of unemployment and the business cycle have yielded irrefutable proof that modern industry and business are characterized by great instability, resulting largely from the constantly recurring seasonal and cyclical depressions in trade activity. It is a curious situation when a continually growing and expanding economic system which displays a remarkable vitality is compelled to face periodical recession and have its bubble of prosperity punctured by slumps in business operations. There is a gradual increase in the number of persons employed and the amount of capital invested. But running counter to this tendency are intermittent lulls in business activity caused by seasonal and cyclical fluctuations. Ever present also is the flux of labor within each establishment, which develops from the general movement of separations and replacements caused by dismissals, voluntary leaving, and other conditions responsible for termination of employment. Certain definite business tendencies contribute toward unemployment.

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[1] Davis, James J., "Unemployment as a Result of Over-development in Industry," United States Bureau of Labor Statistics, *Monthly Labor Review*, vol. 21, October, 1925, p. 695.

> Since these movements go on simultaneously, the number of employed at any given time is a resultant of the four forces—the first tending to increase steadily the total number of employed; the second tending to high employment during certain busy seasons and low employment during slack periods; the third tending to over-employment during periods of prosperity or high pressure and marked under-employment during times of dull business and depressions; and the fourth a turnover of labor within each particular manufacturing plant, which is also responsible for a considerable amount of unemployment.[1]

The grave facts emerging from the innumerable studies of business trends are, moreover, that seasonal irregularities in employment tend to characterize an increasingly large number of industries and to present a greater degree of variation; that cyclical depressions now manifest a greater frequency than in any earlier period; and that, consequently, economic insecurity, in so far as it develops from insecure tenure of work, is becoming an increasingly serious problem for the worker.[2] Business cycles, recurrences of prosperity, recession, depression, and revival in business activities are phenomena which contemporary economists ascribe as peculiar to the form of economic organization which has been dominant in western Europe for less than two centuries, and for a shorter time in other regions of the earth. This is equivalent to saying that business cycles and modern capitalism are correlatives. Stabilization of production and regularization of employment, therefore, must be accepted as a major responsibility of modern scientific management and an essential phase of enlightened personnel administration.

Losses Due to Unemployment.—The financial cost of unemployment to individual workers, to business, to government, and to society at large cannot be accurately computed, neither can it be exaggerated. In a study made prior to the last depression period, it was estimated that in the United States unemployment resulting in complete separation from the payroll was responsible for 30 days lost time per wage earner yearly, and that partial unemployment (hours waiting or part-time work, though on the payroll) was responsible for another 30 days of lost time each year. Thus, 60 days, or 12 weeks, of involuntary idleness each year must be faced by the American workman, to say nothing of the time lost through sickness, accidents, and labor disputes. The total annual dollar loss due to unemployment which all workers experience has been estimated thus:

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[1] Bradford, Ernest S., "Industrial Unemployment, A Statistical Study of Its Extent and Causes," *United States Bureau of Labor Statistics, Bulletin* 310, p. 5.

[2] For an excellent summary of these data, see H. Feldman, *The Regularization of Employment*, Chap. I.

> At an average rate of pay, which is purposely placed low in order not to overestimate its volume, it amounts to a loss of between six and eight million dollars a day, or between $1,500,000,000 and $2,500,000,000 for the 250 to 300 days of the working year. If to this be added an equal amount for wages lost through part-time employment, the total cannot be less than from three to five billion dollars. It is much higher at such a time as the present (1921–1922), when two or three times as many persons as usual are unemployed. Even in normal times, therefore, the unemployment of 16,000,000 industrial wage-earners for a period of 60 working days in the year represents a loss of no small volume.[1]

The National Bureau of Economic Research estimated that the wage earners of the United States worked 10,000,000,000 less hours in 1921 than in 1920 and concluded that their annual earnings were about $7,000,000,000 less.[2] This meant a decrease of at least one-fourth in their income and not less than one-fifth in their buying power. Total wages and salaries, which for 1920 were estimated to approximate $40,000,000,000, decreased in 1921 to approximately $32,500,000,000, and in 1922 to about $31,000,000,000. Thus, the actual loss of earnings in this period was not less than $9,000,000,000. If the 1920 employment and income level had remained intact the receivers of wages and salaries would have obtained fully $16,000,000,000 in money wages more than they did in the years 1921 and 1922. Had it not been for the expenditure of savings accumulated during the period of the World War and the extension of credit by merchants, the purchasing power of the nation's wage earners in this critical time would have dropped to even lower levels, and their standard of living would have suffered greater deterioration. Even if we allow for the wage inflation of 1920 and grant that considerable deflation was inevitable, it would still appear that the workers suffered a loss of almost $10,000,000,000 as a result of the business depression.

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[1] BRADFORD, ERNEST S., *op. cit.*, p. 45.

[2] See National Bureau of Economic Research, *Business Cycles and Unemployment*, pp. 92, 96; *ibid.*, *Employment, Hours and Earnings in Prosperity and Depression*, pp. 108, 144.

The wage earners' losses were much greater during the last depression period than ever, both because of the greater length of the period and because unemployment was much more prevalent than ever before. If it be assumed that the 13,000,000 or more workers idle throughout the entire year of 1933 maintained an average income of $1,000 each during a gainfully employed year, then their losses in wages during 1933 alone were roughly $13,000,000,000. Another estimate of wage loss due to unemployment may be gained by a simple method. One-third of the 39,000,000 nonagricultural employees in 1933 were unemployed during the year. Their total share of income was some 40 per cent of the total national income of $48,000,000,000. The two-thirds of all available nonagricultural workers who were employed earned approximately $20,000,000,000 in wages. At this rate, had all the workers been profitably employed, their earnings would have been $30,000,000,000 or roughly $10,000,000,000 more than actually were received. This $10,000,000,000 thus represents another crude estimate of the wage losses experienced by the unemployed nonagricultural workers during only 1 year of the depression. These two estimates seem to indicate that the wages lost during the year 1933 because of unemployment were somewhere around $10,000,000,000 to $13,000,000,000. At this rate, losses sustained during the entire period must have reached a staggering—almost incomprehensible—total.

The worker's sacrifice in unemployment is not confined to loss of income. Losses in morale, health, skill, and self-respect are less tangible but not less real. Irregular work causes men to become floaters and breaks down morale. "Men who work at casual work develop a casual state of mind, a casual character. Civilized men need a rhythm of steady work. This is what develops habits of industry. Irregular work breeds irregular workers."[1] Unemployment prevents the development and application of skill which comes from constant manipulation at the trade and discourages the industrious employee who seeks to get along economically. Irregular work means loss of income, and loss of income means lowered morale. In the wake of all this comes resort to public and private charity, a humiliating necessity and experience for the self-respecting laborer. During the period 1933 to 1937, inclusive, the federal government spent $9,673,000,000 on its relief and work-relief programs. Added to this amount was another $3,475,000,000 for relief from state and local governments and incalculable millions of dollars from all types of charitable organizations.[1]

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[1] LEWISSOHN, S. A., and others, *Can Business Prevent Unemployment?* p. 112.

Habits of thrift and carefully planned expenditures are difficult to cultivate when life consists of alternating seasons of feast and famine. Swollen records of petty crime, suicide, and violence emerge from the stringency incident to loss of employment. There is increased worry and malnutrition for the wage earner and his family, and inevitably an increase in sickness. Degradation of the standard of living is irresistible under these circumstances, and the recovery of former standards proves discouragingly slow. Mothers and children at such times face the necessity of gainful occupation as a means of warding off starvation.

So much for the sacrifices of the wage earner. What of the losses of the employer, the merchant, and the community? The employer suffers more serious losses than he is likely to realize. Irregular employment indicates idle office, plant, machinery, and equipment, and deterioration of raw materials on hand. Fixed capital not in use enhances overhead costs; for the time being, such capital is unproductive. Partial or complete shutdown of the plant does not mean the termination of all expense. In addition to the overhead charge of unused capital, there are items of expense, such as taxes, rent, insurance, salaries of certain executives, wages of maintenance men, and the irreducible minimum of heating and lighting, which go on just the same. What these losses mean to the employer can be observed by examining the profit and loss statement of almost any organization during the business cycle. The United States Steel Corporation, for instance, showed a consolidated net income of $197,592,060 in 1929 and $50,583,356 in 1936, but operating deficits of $71,175,704 and $36,501,123 during 1932 and 1933.

There is, moreover, the significant fact that the human machine, like the mechanical one, depreciates with lack of usage. Discontinuity of work impairs the worker's skill and efficiency, and upon reemployment he finds it difficult to regain his former productivity. Restriction of output is the natural result of irregular or uncertain employment. The worker fears loss of income and through ca'canny tactics hopes to postpone as long as possible the fateful day when the layoff notice will be posted. Labor turnover is a phase of the larger replacement movement incident to unemployment; it means the loss of trained, experienced, and loyal workers not easily reclaimed when industry revives. New workers have to be recruited, selected, and placed. This means increased cost of hiring, training, and follow-up, not to mention the loss of output, the augmented costs of greater wastage of materials, and the breakage of machinery and equipment which normally accompany the addition of new and inexperienced workers to the organization of any enterprise.

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[1] BURNS, A. E., and E. A. WILLIAMS, *A Survey of Relief and Security Programs,* Works Progress Administration, May, 1938, p. 68.

The merchant's share of the toll of unemployment is equally unmistakable. A reduction of from $10,000,000,000 to $13,000,000,000, in the purchasing power of the nation's wage earners is reflected immediately in the falling off of demands for goods and services. The retailer's turnover grows smaller, his shelves empty less rapidly, extension of credit becomes increasingly necessary, and collections become more difficult and costly. The plight of the retail merchant makes itself felt in the lessened volume of orders received by wholesalers, commission houses, and jobbers. Soon the manufacturer discovers that orders are coming in less frequently. Partial or complete shutdown is imminent, men are laid off, and the army of incomeless wage earners is enlarged. Unemployment thus breeds unemployment.

> The employed are active consumers. When consumers are unemployed and stop calling for goods, factories close, more men are out of work and without purchasing power from current earnings. The more unemployment, the less the demand for goods; the less the demand, the more shutdowns, the more unemployed, and the less the demand for goods. So it goes around in a vicious circle, unemployment causing a reduction of buying power and demand, which in turn produces unemployment.[1]

Ultimately society, the great body of consumers, pays a large share of the bill for unemployment. It pays in increased cost of production, higher prices, larger items of expense for public and private charity, greater cost of crime and delinquency, lowered standards of moral behavior, loss of labor efficiency, destructive attacks upon traditional institutions, and a less desirable citizenry.

Contributing Causes.—If a solution of the serious problems of unemployment is to be forthcoming, there must be an understanding of those conditions which are responsible for the failure of modern industry to provide steady work for those who are willing to work. Viewed in its broadest aspects, unemployment is attributable to a rather comprehensive category of forces. There are, *first*, certain general socioeconomic factors, such as the unequal distribution of wealth and income, monopolization of land, immigration, an inadequate system of labor exchanges, and incomplete facilities for vocational guidance and training. The *second* group of factors is purely economic in character and includes such situations as the evolutionary changes in manufacturing processes and methods, seasonal and cyclical fluctuations in trade activity, persistent labor reserves, overexpansion of credit, inefficient organization of industry and business, and strikes and lockouts. The *third* set of causative conditions relates to the human equation. These conditions are manifested in physical and mental disability, personal inefficiency, and moral deficiency. Then, there is a *final* group of factors which are political in character consisting of the fiscal, tariff, and foreign policies of the government.

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[1] BRADFORD, *op. cit.*, p. 45.

Socioeconomic conditions, such as the unequal distribution of wealth and income, land monopolization, and immigration, do not come within the scope of our present inquiry but belong to a more general discussion of the problem.

Employers and an uninformed public frequently assign an important place to industrial disputes as a cause of unemployment. In the aggregate, a large number of working days are lost through this medium, but the fact is that labor troubles are a relatively insignificant factor in irregular employment, being responsible for not more than 1 or 2 per cent of the total number of working days lost annually by American wage earners. The number of days lost from labor disputes does not exceed 2 or 3 each year for each employee throughout the country.

Disability resulting from sickness and accidents makes less claim upon public attention but is normally a more important cause than strikes and lockouts, the former accounting for about 9 days of lost time per year for each worker.

The personal characteristics of the worker are also often overemphasized as a cause of irregular employment. Secure tenure in employment is not assured by good character, industriousness, skill, and experience. "A man may be perfectly secure in his job —that is to say, have no fear of discharge—and his relations with his employer may be perfectly good, but this gives him no protection from a lay-off."[1] Seasonal and cyclical fluctuations bring layoffs to the capable and incapable alike. The latter are always the first to be dismissed when curtailment of the working force is necessary, but as likely as not industrial depression will force both the good and the bad workman out of employment. It should be noted here that irregular employment is itself a breeder of inefficiency and delinquency and that these in turn produce unemployment and unemployability.

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[1] DAVIS, JAMES J., *op. cit.*, p. 9.

Political causes of unemployment are invariably exaggerated by those who would make political hay out of the workers' fear of loss of income. It is true that financial and business interests restrain themselves immediately preceding a national election, for fear that a change in administrative attitude and policy may prove detrimental to industry and commerce. But governmental policies cannot be assigned an important place as a cause of unemployment.

Evolutionary changes in manufacturing processes have considerable significance in unemployment. The labor requirements of an industry are constantly changing because of the introduction of new processes, new machines, and new inventions. The immediate result is the displacement of numbers of workers, who frequently suffer serious consequences through the loss of their acquired trade knowledge and skill. In the long run, these mechanical improvements, by making larger output possible and reducing production costs, will tend to reduce the price of the article or service and augment demand, so that eventually a larger number of workers than was originally employed may have to be recruited. This is, of course, small comfort to the displaced worker who cannot afford to wait for long-run developments.

Overexpansion of credit is accurately placed among the major causes of irregular employment. During periods of rising prices and general prosperity, employers desire to expand their enterprises in order to get the largest possible share of the volume of business. Credit is necessary to provide additions to the plant and furnish new machinery and equipment. Many entrepreneurs expand their organizations beyond limits warranted by sound business conditions, with the result that the inevitable recession finds them with far greater amounts of fixed capital than the normal demands upon them justify. Workers are thus summarily dismissed and unemployment is increased.

By far the greatest proportion of unemployment results from seasonal fluctuations in the labor market and from business depressions which periodically force a radical reduction in the demand for labor. It is the inability of modern industry to supply steady employment, not the reluctance of the laborer to continue his labors, that causes unemployment. This significant point is expressed in a standard definition of unemployment: "A person is unemployed who is seeking work for wages, but unable to find any suited to his capacities and under conditions which are reasonable, judged by local standards."[1] The central deficiency is in the organization and functioning of modern economic life. The pronounced manifestation of this deficiency is found in seasonal and cyclical deviations from normal trade levels.

It is only in recent years that the extensive disturbances in employment caused by seasonal fluctuations in production have been fully realized. Exceptional is the trade that is able to maintain a fairly equable level of activity throughout the year. Seasonal fluctuations tend to characterize all trades, the difference between them being largely one of degree. Moreover, increasing complexity in the industrial and business structure appears to be accompanied by increasing seasonality of production and employment, thus making the wage earner's hazard of insecurity cumulative.

The contributing factors in seasonal fluctuations in employment are many. Occupying first place are those inherent conditions which adversely affect production, such as the perishable character of raw materials found in the fruit and vegetable canning industries and in the harvesting of grain; the influence of the weather, that is, interferences with manufacturing and construction operations caused by winter and summer seasons and heat and cold; and certain conditions within the industry or establishment, such as size of the organization, efficiency of management, financial resources, degree of specialization, and storage facilities, all of which influence the capacity of the enterprise to continue operation and supply its employees with steady work during periods of temporary slackness. Factors of the second group revolve around demand or consumption. Changes in style, often related to the seasons or the weather, and the all-important role which style plays in modern life, are believed by many authorities to constitute the principal reason for seasonal variation in employment. Other time elements which influence the purchasing habits of consumers are found in holidays, vacations, the opening of schools in the autumn, and the shopping rushes at such times as Christmas and Easter. A final element in the buying habits of people is the character of the goods. The demand for necessities is fairly constant, so that industries producing such commodities suffer relatively little from seasonality. Firms specializing in luxuries, novelties, or style must invariably face spasmodic demand and the constant hazard of seasonal variation.

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[1] ROWNTREE, B. SEEBOHM, and BRUNO LASKER, *Unemployment, A Social Study*, p. xiii.

Special investigations have revealed the fact that there is a fairly regular seasonal decrease in employment throughout manufacturing industries as a whole during midsummer and again during midwinter. The amount of seasonal unemployment varies with the type and volume of business. The building trades are reported to have some 80 per cent more unemployment in December than in August. Machine trades commonly have some 50 per cent more unemployment in December than in May. Again, the printing trades generally employ twice as many in November as in August, and retail trade employment reaches a peak during the Christmas and Easter holiday seasons. The lull in employment within the automotive industry has recently been shoved up several months from the end of the year because of a change in policy in placing new automobile models on the market. This policy has had repercussions upon employment in many lines of production. During the past few years, coal miners have been idle over one-half of the working time each year, and for several decades bituminous coal miners have been idle an average of approximately one-third of each year.[1] Concentration of demand in specific seasons has made it necessary to carry large labor reserves in these industries, and has resulted in seasons of feverish activity in production involving considerable overtime, followed by complete slump and the wholesale laying off of employees.

The more pronounced cyclical depressions which occur periodically in business conditions, and which are caused by a sharp reduction in the demand for goods and services, are accompanied by the laying off of large numbers of wage earners, who for an extended period may find themselves divorced completely from normal sources of income. The business cycle is a record of great prosperity and conspicuous consumption followed by inevitable depression and forced economy. At the peak are "boom" times with rapidly rising prices, large turnover, big profits, high wages, and a higher standard of living; at the bottom are depressions or panics with rapidly falling prices, trade inactivity, small profits or none at all, unemployment, loss of wages, and degradation of the standard of living. With almost predeterminable precision, the general cycle of business emerges from its nascent stages into maturity and inevitable decline. Few are the industries and businesses that have not their own cycle and their own seasonal fluctuations with attendant gains and certain losses.

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[1] Federated American Engineering Societies, Committee on Elimination of Waste in Industry, *Waste in Industry*, p. 16.

These marked depressions, which under modern organization have made their appearance at more or less regular intervals, are the product of a complex network of causes summarized in preceding pages. The depressional years of 1893, 1907–1908, 1914–1915, 1921–1922, and 1930–1935 are too fresh in the memory of many persons to warrant reiteration of the distress that characterized the wage earner's life or the forces that produced it.

A significant fact of interest to the student of industrial relations is that these cyclical depressions, with their attendant disorganization of industry and business and consequent misery for the workers, are appearing with increasing frequency. The intervals between important world crises during the period 1825–1884 averaged 12 years, whereas the intervals in the period since 1884 have averaged only 6 or 7 years.[1] The average duration of 32 business cycles in the United States in the period 1796–1923 was 4 years, which was shorter than for any country under investigation.[2] An equally important fact is that this greater frequency of cyclical depressions has not been mitigated by any manifestation of diminished intensity. The range between the highest peak of prosperity and the lowest point in the valley of depression in business cycles has not evidenced a tendency toward improvement. The depression of 1930–1935 was far more severe than those of 1907–1908, 1914–1915, and 1921–1922.

A prolific source of unemployment is the overexpansion of industry, which is directly related to seasonality of demand. The productive capacity of many industries is unquestionably greater than the total effective demand for their products would warrant. Our productive capacity has reached the point where we can supply an enormous amount of goods and services, and still fail to operate at top production or to employ the services of all those who are capable and willing to work. A few examples will suffice to support this contention. The bituminous coal industry has a production capacity 50 per cent greater than its average annual output. The clothing industry could produce at least one-half more product per year. Less than 15 per cent of our boot and shoe factories could produce 95 per cent of the current output, whereas they produce only 65 per cent of the present total. Steel mills are equipped to produce twice what they normally are called upon to provide. Behind this amazing overexpansion is seasonality of consumers' demand. Factual evidence indicates that seasonal industries require an excessively large reserve. It was estimated a few years ago that, if production could be stabilized, not less than 100,000 men could be released to other industries by our bituminous coal mines; another 100,000 could be let go by our metal manufacturing industries; and at least 75,000 could leave the clothing industry.[1] A similar situation exists in many other industries.

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[1] FELDMAN, H., *The Regularization of Employment*, pp. 11, 12.

[2] For detailed analysis, see Willard L. Thorp, *Business Annals*. Also see National Bureau of Economic Research, *News-Bulletin* 20, Aug. 1, 1926, p. 1.

Closely akin to the seasonal industries are the chronically casual occupations, such as dock work and migratory agricultural labor, which call for purely casual or temporary labor and thus swell an already abnormal labor reserve.

The turnover of labor is of considerable importance as a causative factor in unemployment. Much of the irregular employment which obtains in American industry year after year results from the failure of the worker to fit the job or of the job to last. The former is reflected in dismissals, the latter in layoffs. As was demonstrated in a previous chapter, both types of separations swell the monthly and yearly percentages of labor turnover, the figure for many establishments being as much as 200 to 300 per cent per year. Three-fourths of the total separations are voluntary quits, that is, the workers leave on their own initiative. This situation indicates serious maladjustment in the employment relation and fundamental deficiencies in personnel policies and methods. One-fourth of the separations are caused by discharges and layoffs, which reveal discord and the inability to furnish steady employment.

The multiplicity of causative factors of unemployment suggests the complexity of the problem which confronts employers who attempt to stabilize production and regularize employment. Nevertheless, not a few are attacking the problem with a vision and a fortitude which bespeak much hope for the future of all wage earners.

A New Point of View.—Unemployment has been regarded traditionally as an inevitable phase of modern economic life and has been approached largely from the standpoint of the social evils it produced. Recent years have witnessed a new viewpoint and a new emphasis. Unemployment is now seen not only as a great social evil but also as a great business calamity; it now appears as a manifestation of inefficient industrial organization, an evidence of incompetent business administration, a proof of stupendous economic waste. Not that interest in the social evils of unemployment is waning, but rather that interest in its economic elements is increasing. There is reason to believe that the new economic approach will expedite a solution of the general problem.

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[1] Federated American Engineering Societies, *op. cit.*, p. 16.

Two central ideas have much to do with the significance of the new conception of the problem of irregular work. The first of these postulates the proposition that unemployment is no longer to be regarded as necessary and inevitable but rather as relatively preventable, provided the same intelligence and ingenuity are devoted to it as have been given to mechanical invention, business technique, and other problems of economic organization. The second idea assumes that the provision of regular employment or else the provision of unemployment insurance within the industry is a legitimate responsibility of management. There is emphasis upon the principle that the cost of unemployment is a direct charge upon industry, to be borne largely by management along with other costs of production. Thus, the traditional fatalism, which accepts unemployment as a natural phenomenon in economic life, and the traditional individualism, which encourages a stoical indifference to the effects of unemployment upon the wage earner's standard of living, seem destined to go the way of other economic fallacies and intolerable industrial attitudes.

The American Approach.—This new point of view concerning the nature of the unemployment problem has given rise to an important change in the analysis of methods of amelioration. The traditional solutions include such procedure as long-range planning of public works, acceptance of labor as a "fixed" cost, provision of public employment exchanges, industrial education of the unemployed, and unemployment compensation. The character of these methods indicates that emphasis has been placed heretofore upon social control of the problem. This was natural so long as attention was focused upon the more dramatic and spectacular aspects of unemployment which characterize the occasional severe depression incident to the business cycle, rather than upon the ever-present aspects of irregular work which are identified with seasonal industries. In recent years, however, expert opinion has come to regard the evils of seasonal irregularity of employment as being as burdensome for the wage earner as the occasional abnormal periods of unemployment. This opinion rests upon the fact that seasonal unemployment is constantly a menace to the worker, whereas cyclical depressional unemployment comes at intervals of several years. Moreover, it is sometimes easier for the worker to steel himself against the calamity which comes only occasionally than it is for him to withstand the continual strain of seasonal unemployment. Be this as it may, the fact is that, in the new approach to the problem, seasonal fluctuations receive the major emphasis.

It has remained for American industry to emphasize the necessity and wisdom of devoting attention to the regularization of employment through improvement in the technique of management within the individual establishment and the individual industry and to turn the searchlight of investigation upon the relation of managerial efficiency to the uncertainty and cessation of work. The traditional American obsession anent individual initiative and enterprise and the prevalent suspicion of governmental regulation of industrial relations are probably the reasons for this approach. But whatever its cause, this conception has already definitely turned attention to the necessity of eliminating unemployment rather than accepting it as inevitable and paying for it through doles and other forms of unemployment relief which are unrelated to any incentive to furnish steady jobs. This quickened interest of employers in the prevention of unemployment is extremely important. No solution of the unemployment problem is practicable which does not enlist the willing cooperation of the employers. This, in fact, must be the starting point. When efficient management assumes its legitimate responsibilities in this matter, irregular work, like industrial accidents and occupational diseases, will be reduced materially, and the system of unemployment reserves will be greatly strengthened.

To attack the problem through analysis and control of seasonal depressions is manifestly a sound and practical procedure. Seasonal irregularities in employment occur every few months and present constant distress to the wage earner and continual loss to the employer. Because of the greater frequency and simplicity of seasonal fluctuations, management is in a better position to understand them and to design preventive measures than is the case with the less frequent and more complex cyclical depressions, the causative factors of which are not so well known. The elimination of depressional unemployment incident to the general business cycle is necessitating national and perhaps international action, whereas seasonal unemployment may be reduced or completely eliminated by the efforts of the individual firm. Then, it is well to remember that the accumulation of experience and the development of technique in controlling seasonal fluctuations will contribute much toward reducing the severities of cyclical depressions.

Voluntary Employment Stabilization Methods.—Much unemployment is the result of certain maladjustments in market conditions or of fundamental deficiencies in organization. In so far as this is true, seasonal unemployment is largely a matter of market analysis and intelligent managerial control. The technique of controlling seasonal fluctuations includes the development and administration of scientific methods of production, distribution, and employment. To the extent that unemployment is the result of productive policies, those wage earners who are engaged in the manufacturing and commodity production fields will be most vitally affected. Then those in transportation, public service, private service, merchandising, and other service industries will be influenced by the decrease in the demand for their services and decrease in the general purchasing power. Likewise, in so far as unemployment takes place in the service industries, it must perforce take place also in the production industries. One type of unemployment cannot exist without the other, although it develops with less difficulty in the production industries than in the service industries.

What steps has management taken to apply this approach to employment stabilization?

1. *Extension of Seasonal Markets.*—That part of unemployment which is seasonal in nature has been materially reduced in certain instances by smoothing the market, that is, by spreading orders over more months of the year. Thus the Universal Atlas Cement Company promotes the sale of its products during the winter by advertising reduced material costs when construction labor is plentiful, and the Coleman Lamp Company postdates bills for goods sold in advance of dealers' needs. Sometimes special discounts have been offered to merchants to induce them to place orders in advance. Or, producers have developed their own retail outlets through the establishment of chain stores and the acquisition of stock in retail organizations in order to extend the markets so that they are more independent of the seasons.

2. *Budgeting Control and Business Forecasting.*—Employers have also hit upon the idea of carefully estimating what their demands will be as far ahead of time as practice permits, so that production may be slowed down or speeded up gradually over a number of successive months. Thus they meet the estimated changes in demand that are constantly appearing. The Eastman Kodak Company has constructed a definite system of sales forecasts which serves as a basis for production equalization operations. The American Telephone and Telegraph Company has what is known as a long-

range program under which the approximate number of telephone services expected to be used several years hence has been computed. These estimates aid materially in the establishment of budgets and the allotment of appropriations for each division of the organization, which in turn determine, for a period of years, the number of employees needed for each department of the company's local organizations. It is thus possible for individual companies to iron out a considerable amount of the seasonal fluctuations which otherwise would necessitate the hiring and later on the laying off of many workers. The effectiveness of this program is not difficult to imagine, if only every employer in the nation were to follow this principle religiously.

3. *Manufacturing for Stock.*—Closely connected with long-range planning is the practice of maintaining a fairly constant number of employees throughout all months of the year by manufacturing for stock during slack seasons. Under this scheme, the Procter & Gamble Company has made extensive laboratory and other "aging" tests to study the effects of storing away some of its products manufactured during quiet seasons of the year and then drawing upon these inventory stocks during more active seasons. If this were not done, the seasonal nature of their business would require that many more workers be hired during certain periods than at other times. These laboratory tests establish the aging qualities of all the company's products, so that production schedules can be adjusted to allow for the storage of only those items that do not deteriorate too much from the time they are finished until the time they are distributed for sale.

4. *Diversification of Products.*—Diversification involves the balancing of production and distribution, and consequently of employment, through the introduction of supplementary goods having different peak periods of demand. In this way, the International Harvester Company has added to its old line of mowers, reapers, and binders, which for many years were its chief products. Now it produces over fifty types of machines of a highly diversified character, but the demand for these products is scattered throughout all periods of the year. Similarly the Campbell's Soup Company has increased its variety of products to include packed foods. Again, the Beech-Nut Company has expanded beyond the manufacture of chewing gum to the making of candies and other edibles. The Cudahy Packing Company sells some 150 or more products along with meat. The Firestone Rubber Company has many products besides automobile tires on the market.

5. *Standardization and Simplification.*—This method of regularizing production is quite parallel in principle to that of diversification, yet it might appear to be quite different. Standardization involves the reduction of the number of sizes or types of a given product; diversification has reference to supplementing one product by other "filler" or "side-line" products. Standardization implies the production of identical and interchangeable parts of a product; simplification has reference to the elimination of unnecessary varieties. In the production of electrical lamps for lighting purposes, over 55,000 different types were offered on the markets by producers in 1900; today, the variety has been reduced to 342 types. One producer during this time simplified his production by reducing his products from forty-five to five. Regularization of employment has been made possible by this method in that, through standardization of the product, market conditions have been greatly improved, and demand is steadier because the lamps made by various independent producers are interchangeable with those manufactured by competitors. The potential market for any producer is thus greatly extended and employment needs are more stabilized.

6. *Producing for Sale.*—Some companies have adopted the policy of making what they sell rather than selling what they make. Conservative, pleasing designs of fine quality are developed, which establish the firm's reputation and create a steady demand for its products. In the clothing and shoe industries, certain manufacturers have been successful in modifying extreme style changes as a means of creating a uniform demand for their output. Under such circumstances, it is possible for them to manufacture for stock, with the assurance that there will be a ready market for their goods when buying revives. The reduction of excessive variations in the same product is a primary step in stabilization. Economic production for stock is not possible if a company produces a great number of variations of the same product all having the same seasonal peak.

7. *General Personnel Policies.*—Experience during the past few years has demonstrated beyond question that, even in companies where the greatest possible effort toward employment stabilization has been exercised, variations in the number employed are sooner or later inevitable. In the past, at least two other precautionary measures have been available to the employer: Training and transfer policies may be exercised; or an unemployment reserve fund may be established. Aside from these considerations, there remains but one way of dealing with unemployment, if it is to be dealt with further, namely, to require the establishment of some

plan of unemployment compensation to be paid the worker when he is thrown out of employment.

During times of threatening unemployment, many employers adopt a system of *staggering shifts*. Instead of laying off half the members of their working force as the volume of business or production drops to one-half of its former figure, managements cut down the hours worked by each employee proportionately to half their former level, so that relatively few are completely layed off because of decreased business. Thus, each worker shares the burden through decreased hours of work and decreased earnings. In explaining this practice, as followed by the Leeds and Northrup Company, Philadelphia manufacturers of electrical instruments and gauges, a Sub-Committee on Employment Regularization of the International Chamber of Commerce states:[1]

> Elasticity of working periods to correspond with fluctuations in volume of orders has been a standard policy of the Leeds and Northrup Company, manufacturers of electrical measuring instruments and heat control apparatus. The normal working hours of this company are (in 1931) 44 per week. For a limited period of time the Company has operated on a 50 hour per week basis without detriment to the health of its employees. The over-time policy of this Company is considered to be a direct financial aid to its employees. They are enabled to supplement their normal earnings during rush seasons by additional compensation for overtime work which is paid for at the rate of time and one-half. Increases in man-hours of work instead of increases in total number of employees tend to obviate the necessity for employing temporary workers and subsequently laying them off after a short period. When the volume of business conducted by the Leeds and Northrup Company shows an indication of reaching more or less permanent high level, new employees are added gradually, while at the same time the amount of overtime is proportionately decreased. Conversely, when business resumes a lower level, overtime work is eliminated and if it drops below normal, after other devices such as manufacturing for stock have been applied, there is a corresponding reduction in working hours below the normal weekly standard.

Another personnel device sometimes used is that of *retraining and transfer*. As early as 1931, in the latest period of business decline, the Standard Oil Company of New Jersey had established the policy of not hiring new employees, but rather of making adjustments and transfers for those already in the Company's services. Those not needed in slack divisions of the organization were placed in other departments where their services could be used profitably. In fact, the management even ordered that certain dismantling work that had been postponed during busier times be inaugurated to maintain the payroll at as even a level as possible.[1]

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[1] International Chamber of Commerce, *Employment Regularization in the United States of America*, 1931, p. 48.

In making old employees capable of qualifying for positions available through transfer, it is often necessary to conduct special retraining or vocational-training classes. This work is maintained by the personnel of the educational departments of such companies as the Commonwealth Edison Company, Eastman Kodak Company, Goodyear Tire and Rubber Company, and the Champion Fibre Company. In the latter organization, manufacturers of paper and chemical products, a regular vocational-training class is conducted each year which is designed to prepare employees to fill more than one position.[2] The existence of a competent labor reserve built up in this manner has been responsible for the general understanding among the company's employees that no employee in good standing who has become qualified to fill more than one position would be deprived of employment because of the introduction of laborsaving devices. In explaining this unwritten rule, the company's president states:[3]

> That does not mean that every worker can be assured of the permanence of the same kind of work, but he can be assured of some kind of work. For instance, we recently installed two boilers of a capacity of 10,000 horsepower to take the place of some 26 boilers of a smaller capacity. These large units were so conveniently equipped that one man with a helper could attend to all of the details of regulating them with ease and a greater efficiency than a group of thirty men could handle the original installation. Obviously the old crew could not be retained indefinitely at the same work they formerly did. To take care of such a situation, we maintain what is known as a transfer crew which immediately absorbs any surplus of men and uses them on any designated jobs of miscellaneous sorts, pending the time when they can be fitted into work of a permanent nature which suits their training.

Many retailing establishments also attempt to stabilize employment as much as possible by this means. Department stores, for instance, generally seek to hold old employees during both cyclical and seasonal business declines by transferring between departments or to part-time force, by shortening work shifts, or by assigning vacation periods without pay. Many service organizations, such as banks, transportation companies, public utilities, and civil service, are not subject to the extreme fluctuations of other types of business, hence are not forced to adopt such protective measures.

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[1] *Ibid.*, p. 49.

[2] *Ibid.*, p. 50.

[3] Quoted in International Chamber of Commerce, *op. cit.*, p. 50.

A third progressive personnel policy relieves the financial shock of unemployment through the extension of financial assistance, usually by means of extending a *dismissal wage*. This policy has already received attention in our discussion of wages and salary administration. Its most notable application has been in the garment industry, where for many years workers were granted cash sums up to $500 at the time of layoff. This practice is also customary in certain other occupations. Social service workers are sometimes given as much as 3 months' salary upon being laid off. Many banks extend dismissal compensation to regular employees in cases of permanent layoff. Two weeks' pay is the customary minimum, and in a few exceptional cases as much as 6 months' pay is extended.[1] After reorganization of the the United States Rubber Company in 1929, approximately 500 employees who were laid off were given amounts ranging from $125 to $2,000 in the form of dismissal wages.[2]

Voluntary Unemployment Insurance Schemes.—A few of the leading companies of the nation have tried to deal more effectively with this problem of employment stabilization not only by careful planning of production and distribution, but also by means of unemployment compensation. The practices which developed prior to the passing of the Social Security Act in 1935 fall within two general groups: individual company plans and joint company plans. For several years these schemes promised to be an effective voluntary answer from industry to growing demand for some method of providing compensation to workers during unemployment periods which were beyond the control of the individual workers. While the disastrous influence of the prolonged period of unemployment caused most of these voluntary plans to be abandoned by the summer of 1935,[3] nevertheless, from the historical point of view they serve to demonstrate both the advantages and the disadvantages of voluntary unemployment insurance.

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[1] Industrial Relations Section, Princeton University, *Personnel Programs in Banks*, p. 52.

[2] International Chamber of Commerce, *op. cit.*, p. 57.

[3] A survey of unemployment benefit plans made by the Bureau of Labor Statistics in 1934 found sixty-eight plans of voluntary character, twenty-two of which had been established and maintained by individual companies, five established as a result of collective agreements, and forty-one maintained by individual trade unions for the benefit of their membership. By the end of 1935, however, only five companies were still continuing their plan, no less than fifteen plans having been abandoned because of unemployment insurance

1. *Individual Voluntary Unemployment Insurance Plans.*—For several years prior to and including the time of the great depression, the General Electric Company experimented with an employment stabilization plan for its incandescent lamp factories which involved unemployment compensation during specified idle periods. Under this plan, all employees in the incandescent lamp department who were on an hourly or piece-rate basis were eligible if they had been in continuous employment with the company for 2 years. Participation in the plan was optional. For those joining the scheme, the company deducted 1 per cent of the employee's wage, which was placed in an unemployment insurance fund and matched almost equally by company contributions. All members of the scheme were guaranteed 62 per cent of their normal maximum hours of labor allowed under the National Industrial Recovery Act, less time lost through illness, plague, fire, strike, repair, and other emergency. The principal qualifications were that the company reserved the right to transfer workers from this department to another at the new work rate, to terminate in whole or in part any department or job because of technological improvements, and to make the annual renewal of the agreement optional. Between Dec. 1, 1930, and Mar. 1, 1934, a total of $4,877,000 was contributed into the fund, and $3,561,000 was disbursed in the form of employee benefits.

Early in 1934, the William Wrigley Jr. Company, acknowledging its belief that employees should be free from the worry of insecurity, announced that a fund of $1,000,000 had been appropriated out of surplus for the purpose of affording unemployment insurance to all employees who had been in the company's service for at least 6 months and who were receiving wages or salaries of less than $6,000 a year. Length of benefits was made dependent upon length of service; for instance employees with from 2 to 5 years of service were allowed a "layoff" benefit of a specified amount (usually 50 per cent) of their base pay for a period of 20

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laws. Several other private company plans had been given up because of the necessity to economize, and seven companies continued benefit payments under the "Rochester plan" until the state law became applicable on Jan. 1, 1938. All joint agreements were still in force at the end of 1937, but doubtless these will be changed as state benefits become effective. Seventeen of the twenty-four unions replying to the bureau's recent survey indicated that their plans were still in force in 1937 (United States Bureau of Labor Statistics, *Monthly Labor Review*, vol. 45, October, 1937, p. 839).

weeks during any year. In announcing this plan, the company stipulated that no benefits would be paid if employees gained any relief or compensation elsewhere. This provision was introduced in order to keep those receiving company benefits from selling their labor at reduced rates elsewhere.

Other well-known individual company plans (aside from the yearly "guaranteed employment" programs of such firms as Procter & Gamble Company described elsewhere) have been offered by the Manning Paper Company, the Leeds and Northrup Company, and the Dennison Manufacturing Company. All of these plans had to be suspended because of the prolonged depression which began in 1929, but some have been revived since the enactment of the Social Security Act.

2. *Joint Voluntary Unemployment Benefit Plans.*—One of the most important voluntary cooperative attempts of employers to steady employment was offered through the Rochester Unemployment Benefit Plan. This plan, joined by a number of large organizations in the city of Rochester, New York, established an unemployment reserve fund contributed to by the employer members of the scheme so that limited weekly benefits averaging 50 per cent of earnings (maximum $18.50 per week) might be extended to "laid off" employees after a waiting period of 2 weeks. Maximum payment periods were made dependent upon length of service. Those employed for 1 to 1½ years received benefits up to 6 weeks out of the year; those with 5 years or more received benefits for not more than 13 weeks out of any year. An unusual feature was that unemployment emergency assessments of 1 per cent of the payroll could be made against employees. In February, 1931, nineteen local companies were joint members of the plan, but, by January, 1933, the depression had forced all but seven companies to suspend their memberships. These seven companies, however, accounted for about three-fourths of the total number of employees hired by all of the original nineteen members.

In Fond du Lac, Wis., three concerns, the Demountable Typewriter Company, the Sanitary Refrigerator Company, and the Northern Casket Company, established a joint plan somewhat similar in principle to the Rochester Plan. In this plan, however, each employee laid off by one company was to be shifted, if at all possible, onto the payroll of another member. Failing this, those eligible received approximately 65 per cent of the average wage for an unemployment period not to exceed 100 days during any one year. Benefit payments were discontinued when the employee was offered work, and were not allowed in cases of voluntary withdrawal.

Forces Leading to Establishment of Compulsory Unemployment Compensation.—These plans indicate commendable attempts on the part of private industry to offer greater security to millions of wage earners throughout the nation. But they collapsed in the hour of greatest need. They could not withstand the tremendous burden of a prolonged period of business stagnation and widespread unemployment. In their failure they emphasized the necessity of a united attack upon the problem, just as during their inception and growth they had demonstrated the need for some systematic and widespread scheme of unemployment benefits during periods of forced idleness.

But there were also other forces at work which led finally to the enactment of the federal Social Security Act and the various state laws providing unemployment compensation. Chief among these was the continued indifference of employers to the economic insecurity of their workers, and the apparent spirit of unwillingness to cooperate upon a voluntary basis in the development of a "more satisfactory" way of dealing with unemployment.

This spirit of indifference is best suggested by replies to simple inquiries sent to hundreds of employers during 1934 and the early part of 1935. The questions asked related to whether or not the company had an unemployment reserves plan in operation, if and how unemployment insurance should be provided, and the extent of the company's individual unemployment experience during the 5 years previous to 1935.

Some answers to these inquiries gave evidence of endorsement of the new approach briefly outlined above. One of the leading industrialists of the nation answered, "I favor unemployment reserves (as distinct from unemployment 'insurance') provided such a plan is properly founded." Another leader stated, "Any plan for unemployment insurance must be nationwide in its application and must be sufficiently comprehensive to care for all emergencies." The president of a large steel company commented, "If a sound method could be devised for establishing unemployment relief insurance and if a sound plan could be devised for administering the same without political interference, it would merit consideration." The president of a grocery chain store company wrote that he was very much interested in this subject, but that it "would be vastly preferable to have each industry, or each company in an industry, provide for its own unemployment insurance."

These are indeed encouraging reports. But for every response indicating that this problem was being seriously considered or that some such employment stabilization plan was worthy of trial, fully fifteen discouraging replies were received. Only a few citations will serve to illustrate the feeling of many employers on this point. The receiver of a building corporation replied that "at present this corporation is in bankruptcy and we have not been able to devote time or attention to subjects of this character." The vice-president of a street railway company in Boston stated:

> It is difficult to conceive how the street railway industry can bear any additional burdens. At one time this company had a maximum gross revenue of $13,443,000 and at the present time (1934) this is at the rate of about $6,000,000 a year. The number of employees at that time was around 5,700 and at the present time it is around 1,800..

The vice-president of one of the nation's largest chemical companies wrote:

> In the consideration of unemployment insurance there are presented the broad economic, social and political problems not directly related to the conduct of the business of a corporation by its executives. In accordance with the established policy of this company, we are unable to comply with the requests contained in your letter.

Hundreds of other replies bear out the general thought that unemployment insurance is either impractical or that the problem of unemployment is not one of chief concern to the company.

Statements concerning the unemployment experience of the companies were equally revealing. In the case of most enterprises frank admissions were made that the extent of unemployment within individual organizations was not known, or was not determinable. That the management of any organization does not know the extent of unemployment affecting its own employees is a serious indictment of the principle of *laissez faire*.

But equally significant are the employment trends among those few companies studied that maintained employment records and so knew how serious unemployment could become during a period of recession. The Union Pacific Railway Company reported that the number of its employees fell from 50,445 in 1929 to 24,978 in 1933. The Chicago and North Western Railway Company employed 45,358 in 1929 and 24,014 in 1933. The Crane Company's payroll dropped in 1933 to 47 per cent of what it was in 1929. The United States Steel Corporation employed 224,980 full-time workers in 1929; in 1933, it had a total of 172,577 full- and part-time employees combined; and its total payroll dropped from $420,072,851 in 1929

$163,149,503 in 1933. The Westinghouse Company's employnt dropped from 49,985 in 1929 to 29,980 in 1933.

These, very briefly, were the principal reasons for enacting comsory unemployment insurance legislation. A few individual npanies tried valiantly to meet the problem voluntarily; many ers were either ignorant of or indifferent to the need. Virtuy all failed during the depression when the need was greatest. ployers having failed to solve the problem through insurance or, re accurately, unemployment reserves, various governmental ncies were compelled to devise plans that might extend at least ne financial aid to those who, because of no fault or choice of their n, are denied the opportunity to earn an honest living.

Unemployment Provisions of the Social Security Act.—The eral government's answer was the passing of the Social Security which became a law on Aug. 14, 1935. Two years later, on g. 16, 1937, the Social Security Board announced that all states l territories and the District of Columbia had passed unemploynt compensation laws, and that according to latest estimates, r 21,000,000 workers were employed on jobs covered by these y-one laws.[1] Thus, in the course of 2 short years, over 40 per t of all those gainfully employed in the United States were ught under the scope of this legislation. Time will be required test the strength and adequacy of these schemes. No one, vever, can deny that they offer great possibilities for effective tection.

Only two sections of the federal Social Security Act relate ectly to unemployment benefits. Title III of this statute horized a federal appropriation of $4,000,000 for the fiscal year ing June 30, 1936, and $49,000,000 annually for each fiscal year reafter. These sums are to be granted to the various states upon asis of population and the number eligible for benefits under state mployment insurance laws. Finally, requirements for the eipt of federal grants to states are made dependent upon certain cified administrative procedures.

Title IX of the act imposes a federal tax upon employers of eight nore employees, excepting those engaged in agriculture, domestic vice, casual labor, ships' crews, federal, state, or municipal ernment duties, nonprofit institutions, and railroading. The tax e is set at 1 per cent of all wages in 1936, 2 per cent in 1937, 3 per t in 1938 and each year thereafter. Credit of not more than per cent of the federal tax is allowed to all employers who operate tates with state unemployment insurance laws. Since all states and territories have passed such laws, this provision means that only 0.1 per cent is paid by the employer as a federal tax; the rest goes into the state fund as a state tax. The Social Security Board is given power to establish certain standards of operation for the plan, and several provisions are stipulated which must be met before the government will make credit allowance to employers contributing also to a state fund.

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[1] **Press release of the Social Security Board, Jan. 30. 1938.**

By Apr. 1, 1938, over $40,000,000 in federal grants had been paid to the states and territories for the administration of their unemployment compensation systems, and a total unemployment trust fund of $753,436,034.74 had been established.[1]

State Unemployment Reserves and Insurance Laws.—Since each state has exercised its constitutional right of enacting its own laws relating to unemployment compensation, individual laws vary in many details. Only at important points where federal supervision has been exercised do they have sufficiently similar general characteristics to permit comparative analysis.[2] The personnel department of each organization has had to become thoroughly familiar with the detailed requirements of its own state law, because many questions of policy, record keeping, reports, etc., are raised. The general features of state laws may be briefly summarized as follows.[3]

1. *Type of Fund.*—Most state reserves are accumulated in "pooled funds," which provide for a pooling of all contributions into a single undivided reserve. From this fund benefits are paid to eligible employees, regardless of type of employment, and to former employees. Wisconsin is the only state in which a straight employer-employee account is carried for each firm.

2. *Employers Concerned.*—Most of the state plans follow the federal provision of including only employers with eight or more employees. However, the Idaho law applies to employers of one or more; and in New Hampshire, New York, Oregon, Rhode Island, and Utah, the laws apply to employers of four or more. Most states stipulate that the employing firm must have had the specified number of workers on its payrolls for a period of at least 20 weeks. New York, New Hampshire, Wisconsin, and the District of Columbia have reduced this period somewhat.

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[1] Social Security Board, *Summary of Progress*, 1938, pp.1–2.

[2] For detailed description of individual state plans, see Social Security Board, *Analysis of State Unemployment Compensation Laws*, Washington, D. C., 1937.

[3] Adapted from the Social Security Board's press release on *Analysis of State Unemployment Compensation Laws*, Dec. 2, 1936.

3. *Contribution by Employers.*—Most state laws require an employer contribution of 0.9 per cent in 1936; 1.8 per cent in 1937; and 2.7 per cent in 1938 or thereafter. Again, most state laws provide for a merit rating after 1940, under which the employer's tax may be substantially reduced depending upon the degree to which his employment has been stabilized. This decrease varies up to 3 per cent.

4. *Contribution by Employees.*—In most states employees are not required to make contributions. Where taxes are imposed, the rates vary; for instance, in California, Massachusetts, and some other states, it is one-half of the employer rate; in Alabama a straight 1 per cent rate is provided. The rate in Louisana is 0.5 per cent, and in Rhode Island it is 1 per cent on salaries up to $3,000 in 1938, and 1.5 per cent thereafter. The District of Columbia is the only place providing for a contribution from the government; in fact, this is the only place where such provision could be made.

5. *Merit-rating System.*—Not less than thirteen laws (as of Dec. 1, 1936) provided for some type of merit rating. Such provisions are likely to be expanded.

6. *Benefits.*—All states, but not the District of Columbia, provide that benefits equal to 50 per cent of wages, not to exceed $15 per week, shall be paid. The District's law provides for a benefit equal to 40 per cent of wages, and an additional benefit of 10 per cent for dependent husband or wife, and 5 per cent for dependent relatives, with a maximum benefit of 65 per cent of wages. Minimum benefits vary, the highest being $7.50 per week.

7. *Waiting Periods.*—All state laws require each worker to have been unemployed for certain periods of time before being eligible for benefits. In New York, the waiting period is 3 weeks, but not more than 5 weeks are required during any calendar year. In California, a waiting period of 4 weeks, until 1940, has been established; thereafter, a 3-week waiting period during any 12 months while working for the same employer will be required.

8. *Ratio of Benefits to Employment Period.*—In all states, the number of months during which benefits can be collected by a worker depends upon previous employment records. Most states provide that 1 week's benefit may be paid for each 4 weeks of employment during the 2-year period preceding the date of unemployment and for which no benefits have been collected. There are, however, certain exceptions made in some states.

9. *Length of Employment.*—Employees are required to have worked a certain number of weeks during the previous year to be

eligible for benefits. In some cases, a work period of 26 weeks within the 52 weeks preceding a person's unemployment must be served in establishing eligibility; sometimes 40 weeks in the past 104 are required, etc.

10. *Employment Exemptions.*—State laws usually follow the Social Security Act in making exclusions, but there are numerous variations in this procedure. In the Southern states, insurance solicitors are excluded, and in New Hampshire, hospital nurses and physicians are excluded. In New York, employers of four or more domestic servants are brought within the scope of the act.

11. *Wage Exclusions.*—Only a few states make the amount of salary paid a basis of limitation of benefits. In both New Hampshire and New York, nonmanual workers receiving more than $2,500 and $2,600 a year, respectively, are excluded, while Massachusetts excludes all workers receiving an annual salary of more than $2,500. Those making $150 per month or more, for 10 out of 12 consecutive months on a fixed salary are excluded in Wisconsin.

12. *Disqualification for Benefit.*—In all states, voluntary withdrawal from work, discharge because of misconduct or labor disputes, or the refusal of suitable employment are grounds for complete disqualification or for the extension of the waiting period, although details of individual plans vary considerably. Students are ineligible in California during their vacation periods, and they are completely excluded in Wisconsin. Persons under twenty-one years of age in the District of Columbia are ineligible so long as they fail to attend school as directed.

13. *Hearings and Complaints.*—Employees of all states are given the privilege of fair hearings on denied claims before boards established under the state plans and approved by the Social Security Board.

This brief outline serves to indicate what a tremendous program the federal and state governments have undertaken in attempting to bring greater economic security to almost one-half the working population of the nation through the extension of unemployment compensation. This program has placed definite responsibilities upon hundreds of thousands of employers. The least that it will accomplish is to require individual employers to build up periodic records of employment and the extent of unemployment and to bend conscious effort toward the development and exercise of progressive personnel policies in the gaining of greater employment stabilization and lower payroll taxes. It *can* do much more.

CHAPTER XXIX

PROBLEMS OF THE AGED WORKER

The Aged Employee in Industry.—Few phases of industrial relations have received greater attention than the problem of "what to do with workers whose usefulness at their customary occupations has declined because of age."[1] Both industry and government have recognized for many years the economic hazards of old age. To the employer, these risks take the form of added costs caused by growing incompetence; old age comes and means "hidden costs" as long as the worker is allowed to remain at work. The government views the problem from the standpoint of social welfare and is primarily interested in the degree of dependency faced by the aged worker when his employment in private industry ceases.

Modern industrial conditions are partly responsible for the problems of the aged worker. Division of labor and standardized production have eliminated much of the need for skill and experience. Greater speed required by present-day industry produces nervous strain and fatigue, and these tend to age the worker more prematurely than was the case in earlier periods of industrial development. Many employers of labor have recognized this threat of inefficiency and insecurity, and through enlightened personnel procedure have made adjustments in the duties of the aged workers or have offered them financial assistance without the necessity of work. But most employers were indifferent to the problem until the federal government recognized the necessity of some kind of retirement system.

Problems Involved.—The aged employee presents two general problems to his employer. The first is that of the old employee who either has not been in the service of the company long enough to qualify for retirement, or who has aged prematurely, and thus has passed beyond his peak of productivity to the point where he is incapable of "earning his pay." The problem here involved is that of determining whether to continue this type of worker on the company's payroll. In this regard, the company may do one of three things: It may continue the worker at the same job after certain adjustments have been made; it may transfer him to another task; or it may dismiss him.

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[1] Metropolitan Life Insurance Company, *The Older Employee in Industry,* p. 11. Many helpful suggestions have been obtained from this study.

The second problem relates to a determination of the company's responsibility when the worker has become superannuated after long years of faithful service and consequently has to be removed from the active payroll. Usually, no financial aid is granted by the employer. This means that if no other job or outside funds are obtainable, the federal government retirement plan (or state pension plan) alone affords what little independence the worker may possess, provided he can qualify under the program.

Occasionally, however, financial aid is rendered directly from the employer in the form of industrial pensions or dismissal bonuses. The extent to which individual companies extend financial aid to old employees depends upon several different factors. The age of the organization is important, since young companies usually start out with a fairly young personnel and the working force ages slowly. The degree of labor turnover is another factor, inasmuch as replacements cannot readily be made when employees remain at the same job for many years. Technological changes sometimes lessen the need for the older worker's skill, in which case he may face displacement or reduced earnings. Older workers often are no longer needed because of the merger of one organization with another, a situation which frequently has given the employer an opportunity to cast off the older "deadwood" with little or no assumed obligation. Finally, the general labor policies of the individual company will greatly affect the severity of the problem. If the company has been heartless and irresponsible in its dealings with older workers, the problem is placed largely upon society. On the other hand, if the employer has felt a real sense of obligation, a satisfactory retirement system is quite likely to be in force.

Finding the Problem Cases.—The first step in an approach to this problem is the discovery of individual cases. Several ways exist for doing this. In smaller organizations employing perhaps not more than a few hundred workers, individual cases may be casually observed by supervisors or departmental heads. Hence a textile company employing some 200 people recently reported[1] that by the time their workers reached old age the management was thoroughly familiar with the nature and needs of each one. It is not difficult for the small employer to know the problem cases of his entire organization.

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[1] *Ibid.*, p. 7.

The problem is much more complex for those employing thousands and tens of thousands of persons in widespread offices or factories. Under these conditions, one of the most effective means is to analyze the production records of the older employees. The charting of individual productivity by hours, days, or weeks over a period of several years reveals the trends and peculiarities of production of each employee. These records should also include attendance, accidents, earnings, sickness, and service ratings. Sometimes this review of records is made by having each foreman or supervisor list the most inefficient employees in his department and keep supplementary data on them for a period of time preceding the taking of definite action. At other times, major executives arrange interviews with all employees who reach the age of forty-five, and at 5-year intervals thereafter, so that personal qualities can be carefully observed along with a study of individual performance.

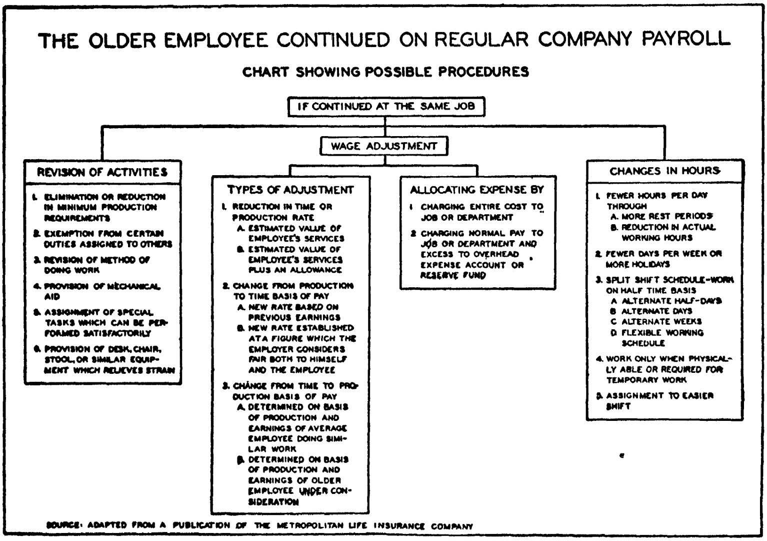
Periodic medical examinations are helpful in this regard. Often, the physical examination is given only at the time the worker is hired, but a policy calling for periodic examinations not only extends to the workers the possible advantage of preventive medicine, but at the same time allows the management to discover the physical impairments among the aged workers and among younger ones as well.

In the administration of labor relations, it is always wise for the employer to extend to every employee the opportunity to register complaints and to request transfers or adjustments as old age slows down individual mental and physical processes. These opportunities can be extended in various ways, such as the issuance of a questionnaire to old workers asking for periodic personal reports on interest, savings, and health.

Adjustments in Present Work.—If the older employee is to remain on the company payroll, adjustments in his work assignments must be made carefully, for he must be placed in the position where he can be of greatest service to the company and earn the maximum wage for himself. This is not an easy thing to do, since the older one grows the more difficult it is to adapt oneself to new working conditions. Sometimes, the suggestion of a change in duties destroys self-confidence and leads to greater inefficiency and a growing feeling of insecurity and resentment, if not despondency. When satisfactory adjustments in activities are impossible, then changes in either wages or hours may have to be made if the worker is to continue at the same job. The possible procedures in making these changes are listed in Fig. 33.

Transfer to Another Task.—If adjustment in the present task is not a feasible way of dealing with the older employee who is not ready or qualified to retire, then relief may possibly be gained by transferring him to some other task. The extent to which this policy can be followed will depend partly upon the number of tasks for which advancing age is not a normal handicap, and partly upon the worker's previous training, experience, capacities, and interests.

Certain types of work present increasing obstacles to employees of advanced age. Jobs that require much physical exertion soon disqualify the older workers. Duties necessitating quick mental reaction, alert observation, keen eyesight, unimpaired hearing, or continuous rapid physical exertion usually prove to be unsuited to the qualities of older people. Of considerable weight also is the degree of skill involved. Where jobs require only semiskilled or unskilled workers, it is usually possible, within a comparatively short period of time, to instruct the employee in efficient methods of performing such tasks. But when the task is complicated or very technical in nature, the required training period may be either too long or too unproductive to justify adoption. One machine manufacturer, explaining why transfers in his company are usually impossible, states that most of the jobs are skilled and that an employee often specializes in one type of work after completing a



THE OLDER EMPLOYEE CONTINUED ON REGULAR COMPANY PAYROLL

CHART SHOWING POSSIBLE PROCEDURES

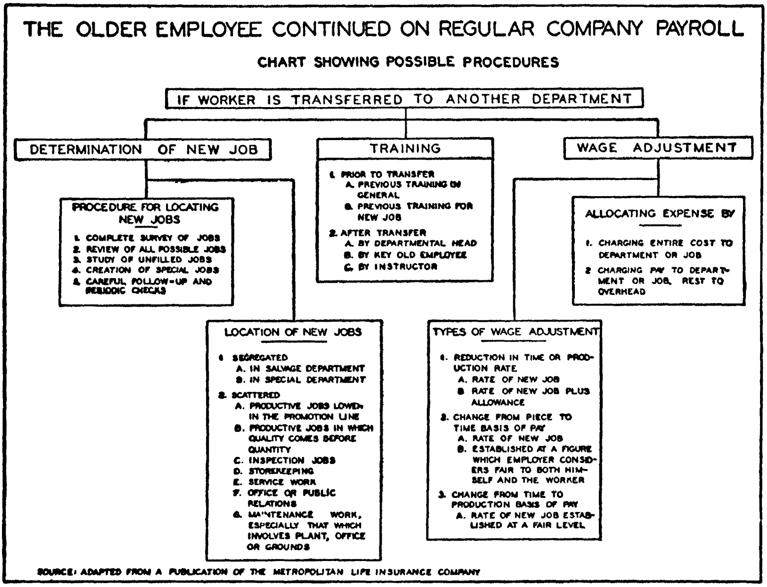
IF CONTINUED AT THE SAME JOB
WAGE ADJUSTMENT
REVISION OF ACTIVITIES
1. ELIMINATION OR REDUCTION IN MINIMUM PRODUCTION REQUIREMENTS
2. EXEMPTION FROM CERTAIN DUTIES ASSIGNED TO OTHERS
3. REVISION OF METHOD OF DOING WORK
4. PROVISION OF MECHANICAL AID
5. ASSIGNMENT OF SPECIAL TASKS WHICH CAN BE PERFORMED SATISFACTORILY
6. PROVISION OF DESK, CHAIR, STOOL, OR SIMILAR EQUIPMENT WHICH RELIEVES STRAIN
TYPES OF ADJUSTMENT
1. REDUCTION IN TIME OR PRODUCTION RATE
A. ESTIMATED VALUE OF EMPLOYEE'S SERVICES
B. ESTIMATED VALUE OF EMPLOYEE'S SERVICES PLUS AN ALLOWANCE
2. CHANGE FROM PRODUCTION TO TIME BASIS OF PAY
A. NEW RATE BASED ON PREVIOUS EARNINGS
B. NEW RATE ESTABLISHED AT A FIGURE WHICH THE EMPLOYER CONSIDERS FAIR BOTH TO HIMSELF AND THE EMPLOYEE
3. CHANGE FROM TIME TO PRODUCTION BASIS OF PAY
A. DETERMINED ON BASIS OF PRODUCTION AND EARNINGS OF AVERAGE EMPLOYEE DOING SIMILAR WORK
B. DETERMINED ON BASIS OF PRODUCTION AND EARNINGS OF OLDER EMPLOYEE UNDER CONSIDERATION
ALLOCATING EXPENSE BY
1 CHARGING ENTIRE COST TO JOB OR DEPARTMENT
2 CHARGING NORMAL PAY TO JOB OR DEPARTMENT AND EXCESS TO OVERHEAD EXPENSE ACCOUNT OR RESERVE FUND
CHANGES IN HOURS
1. FEWER HOURS PER DAY THROUGH
A. MORE REST PERIODS
B. REDUCTION IN ACTUAL WORKING HOURS
2. FEWER DAYS PER WEEK OR MORE HOLIDAYS
3. SPLIT SHIFT SCHEDULE-WORK ON HALF TIME BASIS
A ALTERNATE HALF-DAYS
B ALTERNATE DAYS
C ALTERNATE WEEKS
D FLEXIBLE WORKING SCHEDULE
4. WORK ONLY WHEN PHYSICALLY ABLE OR REQUIRED FOR TEMPORARY WORK
5. ASSIGNMENT TO EASIER SHIFT

SOURCE: ADAPTED FROM A PUBLICATION OF THE METROPOLITAN LIFE INSURANCE COMPANY

FIG. 33.

training period upon which the company spends approximately \$200 per man.[1] Few companies can afford to carry on expensive retraining programs for aging employees.

Graphically shown by the accompanying diagram, three steps are involved in transferring those handicapped in their work by old age. The first step is the determination of the new job to be assigned. Sometimes, where job specifications have been drawn up, the positions involving work standards which old or disabled employees are capable of maintaining are "flagged" for the use of the employment records, so that in the future when there is need of transferring a worker into another position the possibilities can readily be determined. In a company where a study of "hidden pension costs" was made, several representative plants within the organization were chosen for detailed investigation.[2] In making this survey, the management was desirous of finding out how many workers were employed at jobs which, because of old age, they were no longer able to perform efficiently, and what jobs might be performed by this group of workers. An



THE OLDER EMPLOYEE CONTINUED ON REGULAR COMPANY PAYROLL

CHART SHOWING POSSIBLE PROCEDURES

IF WORKER IS TRANSFERRED TO ANOTHER DEPARTMENT
DETERMINATION OF NEW JOB
TRAINING
WAGE ADJUSTMENT
PROCEDURE FOR LOCATING NEW JOBS
1. COMPLETE SURVEY OF JOBS
2. REVIEW OF ALL POSSIBLE JOBS
3. STUDY OF UNFILLED JOBS
4. CREATION OF SPECIAL JOBS
5. CAREFUL FOLLOW-UP AND PERIODIC CHECKS
1. PRIOR TO TRANSFER
A. PREVIOUS TRAINING IN GENERAL
B. PREVIOUS TRAINING FOR NEW JOB
2. AFTER TRANSFER
A. BY DEPARTMENTAL HEAD
B. BY KEY OLD EMPLOYEE
C. BY INSTRUCTOR
ALLOCATING EXPENSE BY
1. CHARGING ENTIRE COST TO DEPARTMENT OR JOB
2 CHARGING PAY TO DEPARTMENT OR JOB, REST TO OVERHEAD
LOCATION OF NEW JOBS
1 SEGREGATED
A. IN SALVAGE DEPARTMENT
B. IN SPECIAL DEPARTMENT
2. SCATTERED
A. PRODUCTIVE JOBS LOWER IN THE PROMOTION LINE
B. PRODUCTIVE JOBS IN WHICH QUALITY COMES BEFORE QUANTITY
C. INSPECTION JOBS
D. STOREKEEPING
E. SERVICE WORK
F. OFFICE OR PUBLIC RELATIONS
G. MAINTENANCE WORK, ESPECIALLY THAT WHICH INVOLVES PLANT, OFFICE OR GROUNDS
TYPES OF WAGE ADJUSTMENT
1. REDUCTION IN TIME OR PRODUCTION RATE
A. RATE OF NEW JOB
B RATE OF NEW JOB PLUS ALLOWANCE
2. CHANGE FROM PIECE TO TIME BASIS OF PAY
A. RATE OF NEW JOB
B. ESTABLISHED AT A FIGURE WHICH EMPLOYER CONSIDERS FAIR TO BOTH HIMSELF AND THE WORKER
3. CHANGE FROM TIME TO PRODUCTION BASIS OF PAY
A. RATE OF NEW JOB ESTABLISHED AT A FAIR LEVEL

SOURCE: ADAPTED FROM A PUBLICATION OF THE METROPOLITAN LIFE INSURANCE COMPANY

FIG. 34.

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[1] *Ibid.*, p. 19.

[2] *Ibid.*, p. 21.

officer of the personnel department visited the chosen plants and talked with the managers concerning the problem and the particular cases with which each plant had to deal. Individual performance and personnel records for each case were assembled, and a comprehensive list of suitable jobs for these workers was compiled. On the basis of these materials, the personnel officer made specific recommendations for transferring the men within each plant to jobs which could be done satisfactorily. A definite policy was established which has proved to be of real value to the company. It was stated that "more than six per cent of the jobs were found to be of such nature that older men might fill them."[1]

After the new jobs have been determined, there still remain the problems of training or retraining and wage adjustments. Methods of procedure in these matters will depend upon the type of work to be done and the qualifications and accomplishments of the individual workers. In almost every case, careful analysis will disclose some positions in which the older employee may carry on the work being done by younger persons. Where this is not the case, either special training or wage adjustments will open up many tasks, such as assembling light work, bench work, checking, gate watching, elevator operation, ground keeping, guiding, inspecting, instructing and training, messenger work, clerking, packing, reception, public relations work, light repairing, and watchman duty.

Retiring the Worker.—When there is no possibility of either making the present task simple enough for the older employee or transferring him to another task which he will be able to do, there is left but one alternative: retirement of the worker either with or without financial aid. Inasmuch as the payment of dismissal wages is discussed elsewhere,[2] only the principles involved in industrial and federal old-age benefit schemes for working people need be examined here. Many employers of labor have recognized the serious problem faced by an old employee who reaches the incapacities of old age after a fruitful, loyal, and lifelong service in an organization. Some of these employers have voluntarily established old-age retirement schemes. The past few years have witnessed significant changes in these industrial pension plans. As is true with other important features of a modern industrial relations program, the personnel department administers these voluntary plans and cooperates with the federal government in

[1] *Ibid.*

[2] See Chap. XVII.

contributing, collecting, and keeping accounts under the old-age benefit sections of the Social Security Act.

Development of Pension Systems in the United States.[1]—Although some twelve industrial pension programs were inaugurated during the 25 years between 1875 and 1899, the movement has had its most rapid development since the turn of the twentieth century. The first plans were introduced by railroad companies, and by 1932, some 42 per cent of all railroad employees were being covered by individual voluntary company schemes. Then the public utility companies started to develop schemes patterned after the older railroad plans. Pension schemes for banks, insurance companies, and certain merchandising companies date back approximately 50 years. The World War gave impetus to the establishment of retirement programs in the manufacturing fields, and, until quite recently, the largest number of individual pension systems have been among iron, steel, and oil companies.[2] Nine out of the ten largest American companies having assets of $1,000,000,000 or more in 1927 had pension plans; while only forty-three out of the one hundred and twenty-six largest companies with assets of less than $250,000,000 had such programs. Relatively few of the smaller organizations had such programs.[3] The scope of pension programs is suggested by the following table, showing tabulations as of the year 1931.

TABLE 13.—NUMBER OF PENSION PLANS AND EMPLOYEES COVERED IN THE UNITED STATES

Industry	Pension plans		Employees covered	
	Number	Per cent	Number	Per cent
Steam railroads	48	11.4	1,572,628	41.9
Public utilities	73	17.4	695,075	18.5
Manufacturing	178	42.4	1,289,644	34.4
Banking and insurance	78	18.6	121,381	3.2
Miscellaneous	43	10.2	74,031	2.0
Total	420	100.0	3,752,759	100.0

SOURCE: Industrial Relations Counselors, Inc.

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[1] For a complete discussion of industrial pension programs, see M. W. Latimer, *Industrial Pension Systems*, Industrial Relations Counselors, Inc., 1932; and National Industrial Conference Board, *Elements of Industrial Pension Plans*, 1931.

[2] GRAHAM, W. J., *Planned Financial Security for Industrial Workers*, Equitable Life Insurance Co., 1935.

[3] LATIMER, *op. cit.*, p. 58.

These data clearly emphasize the importance of this development, first, in the railroad industry and, second, in the manufacturing field. There have been equally significant changes in the reasons for granting pensions. The early plans were established largely through philanthropic action as a means of relieving individual workers in dire need.[1] More recently, however, there has been a growing conviction among employers that pension benefits should be extended to workers reaching the retirement age as a reward for long and faithful service. Some companies, usually those which joined this movement upon a voluntary basis, now believe that a well-developed pension program is a sound business policy. The "increased efficiency of the organization resulting from the elimination of older workers who are slowing down the pace" has been widely accepted as the chief benefit to be derived from management's investments in pensions.[2]

Voluntary Industrial Old-age Pensions.—Those voluntary retirement systems which have not been greatly altered by recent social changes have common general characteristics. Benefits are usually made available to all classes of employees, although in some cases certain classes of executives and salaried employees are excluded from participation. Office employees alone are included in some schemes, a provision which is grossly unfair to factory workers who frequently are in great need of financial assistance. The lower paid unskilled and semiskilled factory employees are less likely to be able to offer the continuous service necessary for a pension, and, unless a reasonable minimum is set, the amount of the pension in such cases is likely to be so small as to be of little benefit.

Pension funds are often supported and managed exclusively by the company. In a relatively few instances, employees are assessed from 2 to 3 per cent of their annual pay, in which case the total payments, sometimes with and sometimes without interest, are returned when an employee leaves the service of the company. Exclusive of the initial fund, the amount set aside by the company each year is generally about 1 per cent of the total annual payroll, although it may be a sum aggregating the amount of the pension allowances or interest from trust funds that have been established.

Certain general rules and requirements govern the operation of pension funds. In nearly all cases, the person receiving a pension may engage in other work which is not prejudicial to the company

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[1] National Industrial Conference Board, *op. cit.*, p. 43.

[2] *Ibid.*

ying the pension. In determining the length of service, which is
ays a condition of participation, temporary absence on account
illness or reduction in the working force in times of business
ression is not counted, unless the period involved is longer than
nonths. Many companies allow a break of 1 or 2 years in
tinuity of service. Assignment of pension allowance is not
mitted, and pensions are not subject to attachment for the debts
the beneficiaries. Pensions may be forfeited because of mis-
duct or at the discretion of the pension board. The maximum
ployment age is usually forty-five years. The retiring age for
le employees is usually sixty-five years and for women ordinarily
ears less. In case of total disability prior to the retiring age,
ne companies are accustomed to grant the disabled worker a
sion if the disability develops from service with the company;
t many firms require from 10 to 30 years of service as a condition
this benefit. It is a common practice to set a minimum pension
owance, the amount being as low as $5 a month in a few cases.
dinarily the allowance is about $20 a month.

The method of determining the pension is quite uniform, the
ount being computed on the basis of earnings over a certain
iod of years. The required years of continuous service and the
centage of earnings are fairly uniform also. The following
mple will indicate how the pension is determined in many cases.
e amount specified is 1½ per cent of the average yearly wage for
10 years preceding retirement, multiplied by the number of
rs employed in the service of the company. Thus:

Average annual earnings for the last 10 years..........	$1,000
1.5 per cent of $1,000..............................	15
Total number of years of service with the company.....	30
The amount of the annual pension this particular employee would receive would then be 30 × $15......	450

A great number of organizations have no pension plans but
vide for deserving cases as they arise. This haphazard pro-
ure has distinct disadvantages. It lacks the element of certainty
ich is so desirable in such financial aid. Then, too, the employee
nclined to feel that the grant is a gratuity and not a deferred
ge earned by long years of continuous and faithful service.

A number of objections have been raised against industrial
sions as they are now administered in the United States. The
ount of the pension is usually fairly generous, as pensions go,
there is ordinarily an element of uncertainty which is manifestly

objectionable. Companies almost invariably stipulate that "the establishment of a pension fund does not form a contract, and that the right to discharge an employee is not affected by the length and character of his service." Moreover, the employee has no assurance that the firm may not be dissolved or merged before the time of his retirement. A few years ago, for example, a prominent firm in the meat-packing industry consolidated with a larger one and its employees were deprived of their pensions. An appeal to the courts by the workers who were approaching the age of retirement availed nothing. The court held that the company could not be compelled to pay the pensions, in view of the fact that the plan was purely voluntary and constituted no contractual relation. The firm always reserves the right to modify the pension plan or to terminate it upon 30 days' notice, and it may suspend or terminate payment for misconduct, the interpretation of which is left entirely to the officials of the company. For these reasons, the average worker prefers that pension plans be inaugurated by the government, as has been done under the Social Security and Railroad Retirement Acts.

Employers are generally agreed that, from a purely financial standpoint, the provision of pensions does not pay, but that judged in terms of human and social values the dividends are large. It is urged that industrial pensions, like sickness or accident benefits, give employees a sense of security, cement the human bonds of the organization, unite management and men on a ground of common interest, and strengthen the morale of the whole working force. An acceptable pension plan doubtless reduces labor turnover, tends to enhance efficiency, and makes the worker reluctant to strike. After many years of service, men are careful not to give cause for discharge or denial of pension. This is why old employees are often unwilling or reluctant to go out on strike and why a conscious effort is made to maintain a good working record.

Some Specific Retirement and Annuity Plans.—The Social Security Act has greatly broadened the pension movement, but there are still numerous industrial pension plans in force throughout the country which have been modified in order to supplement the comprehensive federal old-age benefit program now in effect. Over 50 of every 100 men now twenty-five years of age will, 40 years later, be dependent upon relatives, charity, or some other source of income. Thus the need for protection during old age is great.

In order to help make provision for prospective dependency, the American Cast Iron Pipe Company provides that all men with

20 years of service in the company shall be retired at age seventy (women, fifty), and those with 25 years shall be retired at age sixty (women, fifty). For every year of service, an amount equal to 2 per cent of the average regular monthly wage earned during the past 10-year period is extended as monthly annuity payments during the remaining lifetime of the retired worker. Thus an employee with 25 years of service and average monthly earnings of $100 receives a pension of $50 per month. Employees make no contributions to this fund.

The Mutual Telephone Company of Honolulu provides that any employee sixty years of age or older may withdraw from active company service upon a specified retirement annuity basis. Allowances average approximately 1.5 per cent of the average compensation during service years. If an employee has been with the company 33⅓ years, upon reaching sixty, he may retire with an allowance of approximately half pay. All employees entering the company's service after July 1, 1931, have been required to join the scheme unless there is some real reason for not becoming a member of the fund. Several options are offered under this plan so that in all effects it is quite similar to a regular insurance annuity policy where the insured employee is carrying the full premium load.

Voluntary railroad retirement plans often represented a combination in principle of the two types sketched above, with both employer and employee making contributions. The New York Central pension plan was inaugurated Jan. 1, 1910. It provided that all employees be retired on attaining the age of seventy. Those with at least 15 years of service prior to retirement were to receive a pension, as were those with at least 20 years of service who had been disabled before reaching the age of seventy, but who sought retirement at their own request. Further provision was made for retiring those who had at least 40 years of continuous service and who were not less than sixty-five years of age, but this provision was later dropped. Pension allowances were computed for each year of continuous service at the rate of 1 per cent of the average monthly pay received for the ten years immediately preceding retirement, with no pension less than $10 per month. From the inception of this plan up to and including Dec. 31, 1935, the company granted a total of 14,713 pensions, and 5,771 pensioners were still on the pension rolls.

Only a relatively few department stores have initiated pension systems voluntarily. The Wiebolt Stores, Inc., of Chicago, maintain a plan assuring to each contributing employee a retirement annuity of $25 per month at age sixty-five,[1] but participation is voluntary, and each participating employee shares in the contributions. The Wiebolt plan allows those leaving after 10 years of service to receive annuity benefits purchased by the employer's contribution if their own contributions are likewise applied toward the purchase of the paid-up annuities.

Pension benefits offered by banks are usually computed as a percentage (such as 2 per cent of the average salary during the period of service, or during the past 5 years) multiplied by the number of years of service. In summarizing an analysis of retirement plans of banking institutions, the Industrial Relations Sections of Princeton University states:[2]

> Varying limitations and benefits make comparisons inaccurate, but, in general, eight of the eighteen formal plans (of banks surveyed) pay retirement benefits based upon 2 per cent of salary times number of years of service, and six pay 1½ per cent. One plan provides for benefits computed at the rate of 2½ per cent of salaries prior to the establishment of the plan and 2 per cent thereafter. Another reverses the process and pays 2 per cent for previous service and 2½ per cent for subsequent. The salary used may be the average salary for all service or it may be the average salary for the last three or five years before retirement. . . .

Many other variations in individual plans are to be found, but they need not be discussed here. Since government pensions are so widespread among civil service employees, special mention will be made of them later. Most of the private plans still remaining have been modified so as to supplement the old age provisions of the Social Security Act.

Trade-union Pension Plans.—During the past, a number of trade unions have extended pensions to certain of their membership, some fifteen labor unions having extended total pension payments of $4,678,636 in 1934.[3] These schemes resemble those introduced by employers except that they are not related to wages and are usually fixed in amount. Trade unions sometimes contribute funds to a pension account partially built up through special assessments upon participating members. Often, in addition to this form of aid, unions make special grants to widows and orphans or to permanently disabled members. This type is very unstable, since long periods of depression not only call for greater amounts of money to be spent in making relief and unemployment grants, but also cause reduced membership fees and total union receipts.

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[1] Industrial Relations Section, Princeton University, *Personnel Programs in Department Stores*, p. 68.

[2] Industrial Relations Section, Princeton University, *Personnel Programs in Banks*, p. 41.

[3] United States Bureau of Labor Statistics, *Handbook of Labor Statistics*, 1936 ed., p. 616.

Federal Old-age Pensions under the Social Security Act.—It is evident from the figures given in Table 13 that, for the overwhelming majority of employees in the United States, old age has offered a dismal picture. Relatively few wage earners are able to meet this exigency with any degree of independence. Over 500,000 superannuated persons each year are being thrown out of industry into a state of economic insecurity. By 1935, some 7,500,000 of our total national population were past the age of sixty-five and a half of these were without means of self-support.[1]

The Social Security Act has as one of its principal purposes the establishment of a nation-wide retirement system, so that in the future most people will approach the age of retirement eligible for a modest monthly income for the rest of their lives. Two and a half years after this act became effective, some 38,000,000 American workers had registered with the Social Security Board, and, together with their respective employers, were making contributions into a national retirement fund. Thus was started the most extensive old-age retirement system the world has ever known.

One of the outstanding features of the Social Security Act is the Federal Old Age Benefit system established by Title II of the law. This part of the Social Security program applies to all workers (no state cooperation required) except agricultural labor, domestic service, casual labor, officers or crews of ships, federal, state, or municipal government employees, employees of religious or nonprofit making organizations, and employees of transportation carriers as defined in the Railway Retirement Act of 1935. In order to qualify for retirement benefits under the act, employees have to be at least sixty-five years of age and must have contributed into the federal retirement fund taxes upon not less than $2,000 total earnings received after Dec. 31, 1936, and before the age of sixty-five.

This system further provides for maximum and minimum benefit payments of $85 and $10 per month, respectively. January 1, 1942, marks the date of the first payment out of the fund. The amounts of monthly benefits payable are determined as follows:

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[1] *Report to the President of the Committee on Economic Security*, Government Printing Office, 1935, p. 24.

Total wages received after Dec. 31, 1936 and prior to age sixty-five	Percentage of total wages paid as monthly benefit
Not counting wages in excess of $3,000 annually	
On first $3,000	Benefits will be ½ per cent per month for rest of life
On next 42,000	Benefits will be 1/12 per cent per month for rest of life
On all over 45,000	Benefits will be 1/24 per cent per month for rest of life

Thus, if a worker has received during his working lifetime after Dec. 31, 1936 and before age sixty-five a total of $100,000 in employment not excluded by the act, and if this amount had never included earnings in excess of $3,000 during any one year, the computation of his monthly annuities, beginning when he reaches age sixty-five, would be:

First	$3,000 @ ½ per cent	$15.00 per month
Next	42,000 @ 1/12 per cent	35.00 per month
Final	55,000 @ 1/24 per cent	22.91 per month
Total	$100,000	$72.91 per month annuity

Illustrative benefits for specified average earnings over different periods of time are:

Average monthly salary	Annuity payable after—			
	10 years	20 years	30 years	40 years
$ 50	$17.50	$22.50	$27.50	$32.50
100	22.50	32.50	42.50	51.25
150	27.50	42.50	53.75	61.25
200	32.50	51.25	61.25	71.25
250	37.50	56.25	68.75	81.25

Nonqualified employees (those who for some reason change employment into an exempted occupation, etc.) upon reaching the age of sixty-five are paid a lump sum equal to 3.5 per cent of total wages paid after Dec. 31, 1936, and prior to age sixty-five. Upon death before age sixty-five, the worker's estate receives an amount equal to 3.5 per cent of the total wages paid after Dec. 31, 1936, up to the time of death. If death takes place after age sixty-five, then the estate receives the same amount less the total life benefit payments that have been made up to that time. If the employee does not retire upon reaching the retirement age, benefits are withheld for each month regular wages are received. Payments are not subject to assignment or other legal process. The act establishes an Old-Age Reserve account in the United States Treasury where the funds are invested. The Social Security Board established to act as administrative agent of the law determines, among other duties, the qualifications of individual employees and the amounts of benefits payable.

Title VIII imposes *federal taxes* with respect to employment, and thus builds up the fund out of which old-age pension payments are made. Upon all employers and employees not specifically included in the exemption list, federal taxes are assessed on wages, exclusive of amounts in excess of $3,000 annually paid to any one individual. Each employer is authorized to deduct the employee's tax from wages periodically, and is responsible for forwarding these assessments together with his own contributions to Washington. The tax rate increases progressively until a maximum of 3 per cent from each is reached.

Years	Tax on employer, per cent	Tax on employee, per cent
1937–1939	1.0	1.0
1940–1942	1.5	1.5
1943–1945	2.0	2.0
1946–1948	2.5	2.5
1949 and after	3.0	3.0

Each employee coming within the scope of this act files application with the Social Security Board in Washington and is given a Social Security Number which distinguishes his own account records from the millions of others on file. Since each employee's annuity benefits are to be determined by the total earnings received by him between Dec. 31, 1936, and the time he reaches his sixty-fifth birthday, it is imperative that each individual worker also maintains a duplicate record of his wages during this entire period, so that years later the individual will be able to fall back upon an accurate account, in case any question arises concerning his total wages or contributions.

Maintenance of Wage Records for the Federal Pension System. It is equally important, also, that the personnel records of every employee be brought up to date, and that they maintain all the information that is being called for by both the old-age pension provisions of the Social Security Act and the State Unemployment Compensation laws. This, needless to state, has entailed an untold amount of clerical work and record keeping, the periodic filing of forms, registration of employment, notices of separation, the maintenance of an accurate record of the earnings and contributions of each individual worker, the verification of ages, and many other minor but nonetheless important duties. The constitutionality of these laws has been determined; they are here to stay, and their presence has greatly altered the complexion of no small amount of personnel service work. In fact, personnel officers in all industries are already discovering that these requirements are aiding in the establishment of systematic employment and wage records. One personnel director remarked only recently that he had been amazed at the number of false age reports that for years had appeared upon the company records for old employees. Even many individual retirement systems may profit by an added sense of moral obligation now thrust upon employees to report true ages and earnings.

The employer's specific responsibility in connection with the federal pension system is the maintaining of employee wage records from periodic wage reports required of employers under United States Treasury regulations. Under these regulations, "information returns," or wage reports, are required of every employer reporting the taxable wages which are paid to each of his employees. The first information returns covered the 6-month period preceding June 30, 1937, and were due July 31, 1937. Thereafter, returns are to be filed on a quarterly basis.

Additional regulations require the employer to make an information return for each employee who attains the age of sixty-five or who dies before reaching this age. This must be filed within 15 days after the employee's sixty-fifth birthday or the date of death. Employees are not required to make returns under Title VIII of the Social Security Act.

Some record-keeping experts have reported to the board that "it would have been impossible 10 or 15 years ago to maintain efficiently the wage records of 26 million workers."[1] However, it is pointed out that these same experts now state with confidence that in view of the added advantage of mechanical processes which have been developed during the past 10 or 15 years, the task is quite feasible today.

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[1] Social Security Board, press release, Apr. 17, 1937, p. 20.

Railway Retirement Act of 1935.—A pension program preceding the old-age benefit plan established by the Social Security Act has as its chief aim and purpose the protection of railroad employees during old age. There were two reasons why this law (first passed in 1934, but soon declared unconstitutional, then reformulated and reenacted) was passed. As was previously pointed out, over 40 per cent of the railroad employees of the nation in 1932 were protected from old-age dependency by some form of retirement program carried voluntarily by their respective companies. But the depression proved to be a very serious one, and many companies searching for ways to reduce their expenses more in line with decreasing revenues fell upon their voluntary pension programs. Furthermore, a reduced volume of traffic and improved technological methods were throwing thousands of railroad workers out of employment, and many others growing too old to operate equipment and follow directions safely were clinging to their jobs, thus adding to the unemployment difficulties of the industry.

In the face of this double threat—wholesale abandonment of retirement schemes and the problem of safe operation—the Congress proposed and passed a Railway Retirement Act, later modified and reenacted as the Railway Retirement Act of 1935. This act establishes a uniform retirement system for all railroad employees in American service. At age sixty-five, or at age fifty if 30 years of railroad service has been rendered, workers are extended the privilege of retiring upon a monthly annuity for life. An unusual feature is that if the employee does not retire at age sixty-five his annuity is reduced by $\frac{1}{15}$ for each year in service thereafter, unless extended service is agreed to by the employer. Under no condition can penalty be escaped after age seventy is reached. Annuity payments are computed by multiplying the years of service by a figure representing the aggregate of 2 per cent for the first $50 of average monthly compensation, 1.5 per cent of the next $100, and 1 per cent of the next $150. No benefits are paid on earnings in excess of $300 per month.

The monthly compensation allowable under the act is determined from the payroll records of all subsequent service and for service rendered prior to the passing of the law from payroll records of service from 1924 to 1931. The present values and amounts of the annuity payments are determined on the basis of the combined annuity tables with interest at 3 per cent per year. Maximum annuities are $120 monthly, but no minimum has been established. Provision is made for special indemnity payments in case of death before the annuity has been drawn upon. A companion act imposes upon each employer an excise tax of 3.5 per cent of the compensation not in excess of $300 per month paid by him to his employees after Mar. 1, 1936. It has been estimated that "appropriations" to the railroad retirement account for 1938 will be $118,250,000, and for 1975, $162,250,000. Disbursements from the account for these 2 years are estimated at $58,280,000 and $231,390,000 respectively.[1] A number of changes are being made in this act, but the general features will doubtless remain the same.

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[1] Hearings before the Committee on Interstate Commerce in the United States Senate, S. 2395, 1937, p. 112.

CHAPTER XXX

MISCELLANEOUS PERSONNEL SERVICES

Welfare Services in Industry.—The well-balanced industrial relations programs of numerous American corporations include other personnel services, traditionally referred to as "welfare work." Although they are regarded by many employers as normal requirements in any plan for the successful administration of human relations, these welfare activities have often fallen into disrepute because of the extreme paternalism with which they have been associated in their development. The heartless evictions from company houses and the bloody massacres that have taken place in the tent cities of coal-mining camps and textile communities reveal the total inadequacy of paternalism to safeguard employees' interests.[1] Numerous other incidents also illustrate this inadequacy. For example, in certain towns controlled by employers, employment has often been reduced to a part-time basis, yet employers have continued to require employees to spend their meager earnings at company stores in which excessive noncompetitive prices tend to prevail. Sometimes such employees have found it necessary to revolt against the company doctor or industrial medicine plan when compelled to contribute an unjustly large amount each month for limited, often mediocre, services. One cannot read the history of labor without understanding clearly why it is that "welfare capitalism" and "paternalism in industry" have become such objectionable phrases to many individual workers and to organized labor in general.

All this explains why the term "welfare" is no longer generally good currency in American industry. There has been, however, a genuine change in the philosophy of those activities. During the early days welfare work suggested a sort of condescending patronage, and often savored of "intentional" philanthropy; the employer was primarily interested in extending welfare services in order to exploit his laborers. Today, however, advantages gained through such services as company housing, the cooperative store, credit unions, recreational facilities, benefit associations, and pension plans are accepted by many workers as types of personnel services designed to improve their economic and social status. They have developed from the new philosophy of management, namely, that workers are entitled to share more largely in the benefits of production.

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[1] See particularly Perlman, Selig, and Philip Taft, *History of Labor in the United States,* vol. IV, Chap. 43.

Even now, many of these personnel services are vigorously opposed, and justly so, when they have been proffered as substitutes for desirable standards of wages, hours, and conditions of employment. But where justice has characterized the general administration of industrial relations, these services have reduced the percentage of labor turnover; lowered sickness and accident rates; contributed largely to the creation of interest, good will, and loyalty on the part of employees; and definitely added to the wage earners' real income.

Company Housing.—Wage increases and a shorter workday have not always brought contentment to the worker, because he has often been unable to obtain a comfortable home or a congenial community in which to enjoy his leisure time. The houses in which he is frequently forced to live do not conduce to happiness and stability. It is often true, moreover, that just as soon as employees are granted an increase in wages, rents and the prices of commodities increase, so that advances in pay are absorbed by the landlord and the merchant. Thus, even for the general protection of the working force, company housing projects may be imperative.

Quite apart from these particular interests of employees, it is always necessary to provide housing facilities in isolated industrial communities, such as mining, construction, and textile regions. Even in more developed communities, the supply of houses built by private capital is often totally inadequate to shelter the working forces of the various industrial enterprises, so that employers are compelled to provide a part or all of the housing facilities for their own employees. Companies which discover that their rate of labor turnover is excessive sometimes resort to ambitious housing schemes, among other things, as a means of stabilizing their working force. Frequently, it has been necessary for industrial concerns to inaugurate a building program in order to eliminate the evil effects of bad housing. Certain oil companies in California and textile companies in the Southern states, for example, have found that their employees were living under most unsanitary conditions, with the consequence that the rate of sickness was excessively high. This condition was reflected in inefficiency, lassitude, and troublesomeness on the part of employees, which in turn adversely affected output.

In the United States, there is an interesting tendency toward industrial decentralization which is increasing the necessity for adequate housing facilities. In recent years, certain firms have forsaken the congested industrial centers and established factories in rural or suburban communities. The reasons for this movement are found in a desire for more and cheaper land, power, lower taxes, a larger quantity of sunshine, light, and air, and escape from the recurrent contagion of strikes which sweeps over the crowded beehives of industry. Nearly all of the recent housing developments are in towns or suburban areas. Many employers insist that the basic reason for this migration of industries from the city to the country is that in the former private capital does not provide low-cost accommodations for their workers, so they are compelled to go where they can furnish such facilities at reasonable charges.

Although company housing is not so important an activity as it was a decade or more ago, it still is carried on rather extensively in certain industries and in certain parts of the country. It is perhaps most important in the textile industry. A survey, made by the Department of Labor in 1934 and covering 15 states, showed that 151 out of a total of 191 cotton mills included in the study maintained a total of 20,494 houses accommodating 84,082 workers and their families.[1] In twenty Southern mills, 78 per cent of the workers live in company-owned dwellings, most of which are 4-room houses renting for $1.50 to $2 per week.[2] In some of the textile communities, public schools are partially supported by company appropriations, beach camps have been provided, playground facilities and pools have been improved, and community assembly buildings have been made available.[3] Other illustrations include companies engaged in coal mining, cement manufacturing, lumbering, and automobile manufacturing. Recent reports indicate that the Ford Motor Company has transferred to the Ford Foundation a large tract of land in the vicinity of the Rouge plant where plans have been laid for the building of several thousand employee houses.[4]

Usually these plans develop where no other facilities are available, or where rents are felt to be prohibitive. Companies engaged in heavy construction activities often are forced to build temporary living quarters for their workers. The Metropolitan Water District of Los Angeles, for instance, in the building of the Colorado

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[1] *Monthly Labor Review*, vol. 42, June, 1936, pp. 1492–1495.

[2] *Textile World*, vol. 83, October, 1933, p. 1804.

[3] *Ibid.*, vol. 83, March, 1933, pp. 588–589.

[4] Associated Press release under date of Dec. 10, 1937.

River Aqueduct through the desert, established camps in which dormitories, mess halls, stores, recreational centers, individual homes, schools, and churches were maintained for several years while the construction work was in progress. The American Potash and Chemical Corporation's Trona Plant is located in the heart of the Mojave Desert some 50 miles from Death Valley, Calif. Here some 600 to 800 workers and their families live year after year, residing in air-conditioned dormitories maintained by the company, renting company houses, buying from the company stores, patronizing recreational facilities and schools provided by the company. In fact, these workers live in a modern company village. In the building of Boulder Dam, the federal government constructed a model village community in Boulder City, where the construction workers lived while the project was being built and where all those assigned to routine maintenance work have permanently located.

Other company housing plans are designed chiefly to make it possible for employees to purchase modest modern homes near the place of work at reasonable prices. Under these plans, the company is not interested in owning these houses and renting them out; rather does it prefer to aid the individual employees in gaining title of ownership. In the spring of 1935, employees of the Hormel Company, meat packers, of Minnesota, faced a house shortage, high rents, and crowded living quarters. Through arrangements between the management and local community banks, a number of modern dwellings were constructed at a cost ranging from $358 to $1,669, and employees who so desired were allowed to buy them by means of small weekly payments. A family purchasing a home costing around $1,000 under this plan paid approximately $4 weekly.[1] The founder of the Hershey Chocolate Company chose a site near Harrisburg, Pa., for the location of a new plant some years ago. Today, on that site is the modern industrial community of Hershey with a population of over 2,000 people. The town itself has been built around a carefully prepared plan. A city park, a new hotel, stores, schools, farms, and all the essentials of a progressive, thrifty, industrial community are available. One distinguishing characteristic marks the lives of those who live in Hershey; they pay no municipal taxes, since all governmental affairs are administered by the Hershey Estates. It is a model town.

No absolute principle can be said to govern the desirability or undesirability of industrial housing and community development.

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[1] *Factory Management and Maintenance*, vol. 95, January, 1937, pp. 54–55. Also see *Literary Digest*, Dec. 25, 1937, p. 15.

Practical necessity and advantage must be the deciding factors. It will always be necessary in new industrial communities to provide housing facilities for employees. Whether it will be wise for wage earners to purchase homes will depend upon the relative permanency of the industry and the probable security of the job. No one can deny the social and moral values of home ownership under proper conditions. Renting from the company will always reduce the worker to a status of dependence, but there is no alternative in isolated communities in which accommodations are not provided by private capital. From the point of view of the employer, there is no question that the provision of adequate housing bears a direct relation to labor stability and efficiency, and for this reason industrial housing programs and community development will always be worth while.

Cooperative or Company Stores.—Company stores usually carry groceries, dry goods, and other kinds of merchandise which may be purchased on a "cost plus" basis. The old custom of operating company stores for company profit has become almost universally taboo. Most of the stores are now operated upon the cooperative principle. The American Cast Iron Pipe Company, for instance, operates a cooperative store where most articles can be purchased at cost plus expense of operation. In recent years, the business of this store has been thrown open to the public, under the theory that a larger volume of business will permit a reduction in price. Several years ago, the Ford Motor Company opened up company stores which were designed to serve Ford employees upon a cost-plus basis. Such strong opposition was aroused on the part of retailers doing a competitive business in the community, however, that the company was soon forced to abandon operation of this service. The major weakness of company store operation seems to develop from the conviction that legitimate retailers have a right to the normal business from employees, and that no company should usurp a competitive advantage in the sale of commodities over the regularly established firms of the community. For this reason, merchandising service is not generally offered.

Lunchrooms and Restaurants.—Lunchrooms and restaurants have come to be regarded among the more essential features of betterment activities and are found in innumerable establishments throughout various kinds of industry and business. Indeed, many employers look upon lunchroom facilities as an integral part of the organization and a necessary element in the cost of operation. This point of view is the result of the generally accepted conclusion that a causal relation exists between wholesome and well-prepared foods and the health and efficiency of the working force. The old dinner pail and lunch package with their cold drink and poorly selected food are passing into history; this change is hastened wherever an organization installs a lunchroom.

Whether a company shall install a lunchroom will depend upon certain basic considerations, such as the extent to which it is deemed desirable to provide employees with proper food, the distance between the plant or office and the homes of employees, the relative advantages of keeping the workers on the premises during the noon hour, the eating accommodations in the immediate vicinity, and the character and habits of the working force. A company employing largely immigrants from the south and the east of Europe may find it impracticable to provide lunchroom facilities, because these workers usually have such modest incomes, practice such rigid economy, and desire such peculiar types of food, that they look askance at eating in a company cafeteria or restaurant. Prices that appear reasonable to an American seem extraordinarily high to an immigrant. Yet it is in these plants that the greatest need exists for healthful and wholesome foods, because it is among this class of employees that economy is carried to limits that jeopardize health and efficiency.

In industry and business alike, one finds restaurants, lunchrooms, and cafeterias. The type of accommodation will depend upon such factors as the number of persons to be served, the kind of workers employed, and the number and quality of nearby eating establishments. The cafeteria is most popular in many industries, largely because it combines a considerable variety of food with reasonable prices and makes possible a high rate of speed in service with a minimum of help. Counter service is also a rapid method of serving employees, but it is not comparable to the cafeteria in this respect. Although the restaurant, with its waiter service, is commonly provided for the office force and executives, and in not a few cases for the rank and file of employees, it is not generally regarded as satisfactory for large working forces.

There is often an unwillingness on the part of factory employees to eat with their employers, superior officers, and "white-collared" clerks. The former are more at ease and enjoy greater mental freedom when they are allowed to eat with their own group. This is accounted for partly by the difference in dress and partly by the common inferiority complex which invades the minds of factory operatives and office workers in the presence of "bosses." Even where the same dining room is used, separation seems naturally to occur, the executives and office employees taking different tables from those occupied by the workers. Attempts to prevent this segregation have often resulted in dismal failure, although it is obvious that constructive results in the cultivation of cordial personnel relations would accrue from more democratic relations during the lunch hour. The tendency seems to be in the opposite direction, that is, to provide for officials and office employees dining-room accommodations which are more or less separate from those set aside for employees of production departments.

There is some variation in conditions of service. In general, prices of food and drinks cover only the cost, or are below this. In only a few instances are meals served free, usually only to certain overtime and nightworkers and juvenile employees. Payment for meals is usually in cash, although sometimes a book of tickets is sold. It is not uncommon for a company to provide free coffee for employees who bring their own lunches; in many cases soup and coffee are sold at a very low rate to such workers. Some companies provide gas plates and stoves for heating lunches.

The management of lunchrooms usually is in the hands of the company. Even if a concession is given to an outsider, the firm endeavors to supervise the quality of food and to limit prices to levels that allow only a small profit. In some instances, employees manage the restaurant, either on a cooperative basis or at a small profit which goes into the general funds of the mutual benefit association or the athletic association. Joint management of lunchrooms by a committee representing management and employees is often viewed favorably.

The successful administration of lunchroom facilities rests upon certain fundamental requirements. Meals should be well balanced and consist of well-cooked foods. The lunchroom must be so located as to be accessible and convenient to the largest possible number of employees. There must be efficient arrangement of entrances, exits, serving counters, and kitchen. Only in this way can service be expeditious, congestion avoided, and complaints prevented. The lunchroom must be clean and attractive. Employers have discovered the necessity of providing expert dietetic direction or advice so that meals may be adjusted to the needs of different classes of employees. The energy-producing foods required by manual workers who must exert great physical effort are not suitable for office employees.

Employees who bring their own lunches should be required to leave the office or workroom at the lunch hour. Greater relaxation, mental and physical, is possible if employees get completely away from the desk or machine at the noon hour. Incidentally, such a practice will have a favorable influence upon production and general efficiency.

Rest Rooms and Locker Rooms.—Whether the establishment be a bank, a department store, a factory, or a railroad, rest rooms are now considered an essential part of the physical equipment, especially if the number of female employees in the organization is large. Many employers insist that a rest room is as necessary as good lighting, proper ventilation, and adequate sanitation. Temporary fatigue, illness, and other circumstances which constantly occur in the course of the day's work make it almost indispensable that some kind of a rest room be provided. Although many employers do not consider rest rooms necessary and profitable, those who have provided such facilities state that the expenditure involved yields good dividends. Because they are used only during a short period of the day, at the noon hour and other infrequent intervals, the cost involved is considerable. Nevertheless, such accommodations should be accepted as an item in the normal cost of doing business.

Employees generally manifest a deep appreciation of rest room facilities, and experience indicates that the financial outlay involved in their installation is more than compensated through the salutary effect upon morale, efficiency, and good will. Rest rooms are customarily provided only in those establishments employing large numbers of women, but an increasing number of firms, especially railroad and streetcar companies, are installing rest and smoking quarters for all employees. In those plants which give the workers rest periods long enough for them to leave the place of work and get complete relaxation, rest rooms are a basic requirement. Along with them, ample locker-room facilities should be provided.

Recreational Opportunities and Facilities.—American employers have been generous in providing recreational opportunities, but there is no general agreement either with regard to the necessity or the advantage of such a practice. A decade or so ago, the provision of ways and means for outdoor recreation for employees was regarded as quite necessary, but in recent years, conditions have developed that make the case less certain. Very important among these conditions are the increasingly wide distribution of automobile ownership among wage earners and the rather definite movement toward home ownership in the suburbs of the large industrial centers. The utilization of outdoor sports in the immediate vicinity of the office or plant is manifestly difficult under these circumstances. Perhaps a no less important modifying factor is the rapid development of municipal recreation under trained leadership, which is one of the most encouraging tendencies in American municipal life. Where the city provides a trained director of recreation, it is not uncommon for groups of industries to contribute a stated amount annually toward the upkeep of this service, and the different teams are usually organized according to their industrial affiliations. This is a source of great relief to the employer who wishes to provide recreational facilities but is unable to do so because of lack of space. It is no less welcome to those employers who have found a spirit of professionalism growing up in connection with their sports program.

There is some reluctance on the part of the employers to take the initiative in providing recreational facilities for employees. This attitude is produced by the fear of developing paternalistic control of the workers' leisure time. In the formulation of plant recreation programs, therefore, there is a tendency for management to let the request for any particular activity come from the workers, the company offering encouragement or assistance when employees manifest a real interest. In response to workers' requests, both indoor and outdoor recreational facilities have been widely developed.

Baseball, football, basketball, tennis, golf, handball, volley ball, quoits, and horseshoes are among the numerous sports in which millions of American employees engage under the direction of the business firms with which they are connected. Many firms have been forced to withdraw their support from teams in the major sports because of the development of professionalism with its attendant evils. These teams play in commercial or industrial leagues, and it is a common practice to recruit good players and assign them to "velvet" jobs in the organization. Such employees frequently make undesirable workers and are a source of jealousy on the part of the other employees. Besides the growth of professionalism, there is also the danger of creating an undesirable type of rivalry between the different companies associated in the league. For these reasons many firms now encourage only interdepartmental or interplant games within their own organizations. But competition with the teams of other firms develops a healthy rivalry if properly directed and kept within reasonable limits, and it is still the common practice for one or more of a company's teams to maintain membership in a minor or semiprofessional league or in an industrial league.

Because they offer the opportunity for active participation to a comparatively large number of employees, such sports as tennis, horseshoes, quoits, volley ball, and golf appeal more strongly to many companies than do the major sports. In recent years, the opening of municipal golf links and tennis courts throughout the United States has resulted in an unprecedented popularization of these sports so that both factory and office employees now play them. Golf is coming into popularity among Americans, and a large number of firms now provide help in maintaining courses for their employees.

The various athletic features are managed in many plants through an athletic club or association composed usually of a large proportion of the employees. In other companies, an athletic committee has charge of the different sports. Where there is a club or an association, employees are usually charged a moderate fee ranging from $1 to $3 a year; but if social activities are included, the fee is considerably higher. An annual field day is often sponsored by such associations.

Summer camps and resorts are established by many firms to make possible cheap and healthful vacations. In some cases, such places are in charge of a matron and a physician and are open primarily to those who are physically below par. The question of providing a vacation resort is a debatable one. A vacation spent completely away from ordinary associates and the usual environment is likely to prove more restful and helpful. For this reason many establishments prefer the vacation bureau, the purpose of which is to assist employees in finding satisfactory and reasonably priced resorts. Rather than provide summer camps, many companies have organized country clubs, which represent the most elaborate of all recreational enterprises. These are located near enough to the city to be used after work hours and during week ends and are situated where there are natural advantages for outdoor recreation such as swimming, boating, and tennis. The rates are reasonable, and employees make good use of such facilities.

Within the last 10 years, the organization of adult recreation along community lines has met with remarkable success and is contributing much toward the solution of the recreation problem. In many of our cities, industrial athletic associations work in close cooperation with the municipal recreation department. The motto everywhere seems to be "Sport for sport's sake," and every effort is made to have the largest possible number become active participants in the game. The encouragement of only a few star players who repeatedly represent their firms is not tolerated. Close cooperation between employers and employees is secured through the representation of both on the recreation committee of the industrial athletic association. Equipment for various sports is furnished employees at low prices. The employers' dues range from $5 to $25, according to the number of employees in the plant, but no dues or fees are charged employees, all of whom are considered active members.

These new developments indicate a marked tendency to encourage organized play among factory and office employees. It is a highly important responsibility.

> With the increasing specialization in manufacturing processes and the consequent monotony and dulling of interest on the part of the workers, it is imperative that a systematic effort be made to furnish an incentive to such workers; and nothing, it seems, can better meet this need for self-expression than the friendly rivalry and interest furnished by competitive sports and games.[1]

Legal and Financial Aid and Advice.—There are many types and varieties of financial organizations promoted within the company in the interest of the workers' financial needs. The relative popularity and the trend in development of the most important employee savings programs, as reflected by conditions within over 200 companies throughout the country will be observed from inspection of the contents of Table 14. The depression period has been accompanied by a swing away from employee stock purchase plans and a marked development of credit associations to help meet emergency needs of the employee. The extent of these changes is clearly suggested by the data in Table 14.

The average worker's ignorance with regard to legal technicalities and investments makes him an easy prey for unscrupulous promoters and others who are the vultures of the present economic system. Legal advice is expensive, and investment advice is often given by the inexpert. For these reasons, many firms have seen fit to enlarge their legal departments in order that employees may come to them for sound advice and assistance. Here the alien employee will find suggestions as to the easiest and quickest way to obtain naturalization papers, and any employee may obtain advice concerning any legal entanglements in which he has become involved.

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[1] United States Bureau of Labor Statistics, *Monthly Labor Review*, vol. 24, May, 1927, p. 16.

Adjustment of personal and domestic difficulties is often expedited through cooperation with such institutions as the juvenile court and the court of domestic relations.

TABLE 14.—RELATIVE STRENGTH OF DIFFERENT TYPES OF EMPLOYEE SAVINGS PLANS, 1929 AND 1936
(As indicated by over 200 companies)

Type of plan		Bank deposit	Company investment	Employee stock purchase	Investment trust	Building and loan	Credit union	Composite thrift	Total
1929	Number	58.0	39.0	117.0	9.0	25.0	27.0	7.0	282
	Per cent	20.6	13.8	41.5	3.2	8.8	9.6	2.5	100
	Rank	2.0	3.0	1.0	6.0	5.0	4.0	7.0	
1936	Number	50.0	27.0	32.0	5.0	17.0	77.0	9.0	217
	Per cent	23.0	12.5	14.8	2.3	7.8	35.5	4.1	100
	Rank	2.0	4.0	3.0	7.0	5.0	1.0	6.0	

SOURCE: Industrial Relations Section, Princeton University, *Employee Savings Programs*, 1937, p. 14.

In order to safeguard the savings of their employees, many companies offer free investment advice. When an employee picks out a home and obtains a price on it, he may bring all the facts to the legal department of the firm and procure advice before paying any money on the contract. A free examination is made of the contract, abstract, and deed to the property; and, if desired, an appraisal will be made by a member of the firm who is expert in such matters.

Loan funds are sometimes established for the purpose of assisting employees in buying or building homes. A number of these funds are maintained to help workers through temporary financial difficulties caused by illness or other unforeseen circumstances. The "loan shark" is a problem to both employees and employers because of the garnishment of wages when workers are so unfortunate as to fall into his hands. He charges exorbitant rates of interest and has devious ways of getting around state usury laws. Loan plans for employees vary. Sometimes loans are made for the purpose of protecting employees, in which case no interest is charged but an agreement must be signed permitting the employer to deduct the principal from the worker's pay envelope in regular installments. An example of the success of this plan is found in the case of the company which in a single year loaned to its employees $300,000. The loans were repayable in small installments, and only $150 remained unpaid at the end of the year. Many companies have deemed it necessary to charge rather high rates of interest on loans in order to discourage the habit of borrowing, which becomes chronic with certain workers.

Sometimes the personnel department arranges for the establishment of an *employee credit union* for the purpose of investing and loaning funds to and for employees only. Under a credit union plan usually membership shares are sold at the rate of $5 each. Certificates are issued, the money is pooled, and loans are extended to those members desirous of making small emergency borrowings. This type of credit organization is quite popular, and meets a real need among employees. In February, 1935, some 93 of these credit unions had been established in the various divisions of Armour and Company. These plans were being participated in by almost half of the company's 39,000 employees whose accumulated savings 2 years ago were in excess of $600,000.[1] The first of these unions to be organized in the company began in 1930.

Credit unions are now operating among thousands of groups of employees in all walks of life. Over 50 per cent of the employees of the American Aluminum Corporation are members in one of the company's many unions. Here the regulations concerning membership, loans, and withdrawal notices vary. The unions are usually controlled by a board of directors or a loan committee elected by the membership. When a union member desires a loan, a regular loan application is filed, and his credit rating is carefully established. The loans range ordinarily from $25 to $100; sometimes amounts up to $500 have been extended. No borrower is allowed to secure a second loan until the first has been repaid. Repayments upon the time-payment plan are encouraged. When the loan fund established through memberships reaches an unprofitably large balance, the sale of further loan shares is usually suspended until new funds are needed.

The encouragement of home ownership among employees is a practice which has yielded immeasurable benefits. Many firms loan money to their employees on easy terms, sometimes without interest, when the purpose of the loan is to purchase a home. Stability of the working force invariably results. Building and loan associations, operated on the mutual plan, are often organized by industrial concerns for the purpose of encouraging home ownership. Sometimes these associations receive generous financial aid from employers who maintain a certain number of shares to be assigned to workers when they purchase a home.

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[1] Ellerd, Harvey G., "The Credit Union Movement in Armour and Company," *Personnel*, vol. 11, no. 3, February, 1935, p. 76.

It is difficult to say how far a company should go in providing plans for the encouragement of economy and thrift. Banks, insurance companies, and industrial finance companies have introduced savings plans for employees. In some cases, these plans have been initiated by the employees themselves. During the early part of 1937, Mr. Gerard Swope sent to all employees of the General Electric Company not included in the Federal Old Age Pension Plan a letter presenting a new savings scheme. The plan calls for all interested employees to contribute 1 per cent of their wages for the next 3 years. These contributions are matched by funds from the company, and the money collected is set aside in a special savings fund. The company then invests this amount in United States bonds netting approximately 2.9 per cent return. The bonds can be cashed in during any emergency, and in case of employment termination they are delivered to the employee. But as long as the worker remains in the service of the company, the bonds are left in a trust fund as a savings-investment account.

Where the firm makes an appreciable contribution to the thrift fund, either in the form of a principal sum or in additional payments or interest, there is reason to believe that employees welcome such assistance. The case is not so clear where the company acts merely as a collecting agency for a local bank and makes no contributions itself. Even in such cases the employees are likely to be greatly benefited if paternalism is guarded against, since it is easier to deposit savings at the company office than it is to go to the bank.

Educational Refund Plans.—Financial assistance is also given by some companies for the express purpose of carrying on or completing certain types of educational programs. One of the best known plans of this type is the educational refund plan of the Socony-Vacuum Oil Company of New York. Its general purpose is to encourage self-improvement among the company's employees through attendance of approved courses given by recognized educational institutions. The company's Industrial Relations Department assists employees in making the necessary arrangements and in the selection of work to be done.

Under this plan the employee is expected to pay all tuition charges in advance. Upon successful completion of the work the company refunds one-half of the matriculation costs (tuition, books, equipment, etc.), provided certain requirements have been met. The most important of these requirements are:

1. Courses taken must be approved in advance.
2. Employees must be in good standing with the company and must have had at least 6 months' continuous service before being eligible for refund.
3. Enrollment application must be filed with the industrial relations office.
4. Applications for refunds must be properly filed.

As was mentioned in a previous chapter on training, many other organizations, such as banks, insurance companies, brokerage houses, and accounting firms offer somewhat similar educational refund opportunities to those who spend money on additional educational training in extension classes, if the management is convinced this will prove to be a good investment.

Vacations with Pay.—The policy of extending to employees a vacation period with pay has been gaining considerable favor in business organizations during the past few years, although this practice is still far from common in many industries. Among salaried workers in offices, stores, banks, professions, and similar activities, the custom has become traditional. It is, however, quite an innovation among most manufacturing plants and other organizations which operate on hour or piece-rate plans. There is strong indication that even here the practice is receiving recognition. In a recent survey of 100 representative large companies, it was discovered that 21 had given vacations in the past but no longer were doing so, largely because of the depression.[1] Sixty-two of these companies reported that they were allowing no paid vacations to wage earners, while 17 others gave vacations with pay to all wage earners with 1 year's service record; the remaining 21 gave vacations with pay to those with service records ranging between 2 and 25 years.

Most plans offer 1 week off after a year of service, and 2 weeks after from 2 to 5 years of service. The vacation period usually begins at the end of the spring months, although sometimes vacations are scheduled the year round. In a few cases, vacations for all employees are scheduled at the same time, and only a skeleton force is left during the period chosen. When a definite vacation period is established, it ends during the early fall months, and working schedules are made up so that a too great decrease in general activities will be avoided. The usual custom in this regard is to arrange these schedules so that never more than 10 per cent of the regular workers are away from any department at any one time. Often when a legal holiday occurs at vacation time an extra day is allowed either during the vacation or at some other time subject to special arrangement.

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[1] "Vacations with Pay," *Factory Management and Maintenance*, vol. 93, June, 1935, p. 248.

When companies assign "honor days" as rewards for perfect attendance during any period of time, such as one-half day "honor day" for no absence or tardiness during a working month, these are allowed to accumulate during the year, if the employee so desires, and may be used to extend the regular vacation period. The employee's own convenience or choice should be recognized as much as possible in the scheduling of vacation periods, and he should always be consulted before these have been definitely announced.

Handbooks and Suggestion Systems.—The employment relations of different organizations vary so widely that each company should issue an "information booklet" setting forth its employment policies and practices. These booklets are usually designed to give each member of the working force a complete understanding of the rules and regulations of the organization. They should include a preface or foreword in which their general purpose is suggested, and should contain such information as company history, employment policies, remuneration, working conditions and regulations, health regulations, safety requirements, training, security plans, employee services offered by the company, and general instructions. When properly planned, they can be made a valuable auxiliary service to all employees.[1]

Also important is the employees' suggestion system, which attempts to gain from the employees frank and constructive suggestions as to improvements of all kinds that would strengthen morale and loyalty and increase productive efficiency within the organization. Suggestion boxes are placed in conspicuous and convenient places throughout the office and plant, and attractive rewards are offered for the best ideas that come in. In regard to this system, the chairman of the board of directors of the Socony-Vacuum Oil Company states:

> Honest and intelligent cooperation is the most valuable single factor in the success of any business. It implies not only a willingness on the part of employees to carry out instructions of the management—putting company interests ahead of personal motives—but the active contribution of intelligent thinking and creative imagination. Obviously an organization must have heads and supervisors, but it is a great mistake to think that management has all the brains.

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[1] For a complete description, see Metropolitan Life Insurance Company, *Employee Handbooks.*

> Believing that many employees, living in daily closeness to their work, have ideas which would be most helpful to the management, a plan whereby suggestions can be presented, without embarrassment to anyone and yet with full recognition for merit, has been approved by the Board of Directors.[1]

To this end, the company provides for a system to which all employees, excepting supervisors and executives, are eligible. The system is administered by a central suggestion committee appointed by the board of directors, the members of which represent the various interests and activities of the company. Under this central committee, several local suggestion committees serve to receive, review, and investigate all suggestions according to the specified procedure. Cash awards are announced through the central committee and range in amount from $5 to $100. Cases of special merit are awarded by amounts in excess of $100. For the best suggestion of the year an additional award of $500 is made; for the second best $300; and for the third best, $100. The basis of the award is primarily the financial advantage which the suggestion yields for the company; but ingenuity, initiative, effort, and completeness are also recognized. Other plans are similar to this, but the details vary according to the type of business.

Disability Funds.—The tragic aspects of the insecurity which characterizes the life of the modern wage earner are gradually being impressed upon the minds of employers and the community. Sickness, accident, disability, unemployment, and old age present serious problems and bring almost immeasurable burdens to those whose incomes are totally inadequate to provide for the "rainy day" that is sure to come. Industry must eventually cooperate with the wage earner and society in meeting these exigencies of life.

Progressive employers have made some advance along these lines. Careful investigations show that at least 50 per cent of all industrial absenteeism is caused by sickness, fully one-half of which is preventable. But illness will occur, and the loss of income which it entails must be relieved in some way. Although sick leave with pay is quite generally granted to many office workers and often very generous provision is made in cases of protracted illness, it is not customary to pay other workers during incapacity caused by illness. In an increasing number of organizations, however, provision is being made through the relief benefit association, or in connection with the group-insurance plan, for payment of wages or benefits in cases of sickness and nonindustrial accidents. These insurance funds are either supported entirely or assisted materially by the employer. In the new employee insurance benefit plan of the Niagara Hudson Power Corporation, for instance, group insurance without medical examination, together with sickness and nonoccupational accident insurance protection is offered to all eligible employees of the organization at a small cost that is supplemented by company contributions.

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[1] From a pamphlet published by the Socony-Vacuum Oil Company and circulated among its employees.

The provision of sickness benefits or insurance entails serious difficulties, because of the necessity of guarding against feigned illness by astute malingerers and the danger of making the slightest illness an excuse for absence from work. Certain fundamental principles must be followed if such plans are to succeed; they should be willingly accepted by both management and men. A plan that is forced upon the workers by the employer will invariably fail. On the other hand, if the management is not enthusiastic about the scheme, success is highly improbable. Democratic administration is essential to the best results. Employees must be given the fullest possible representation on the board of directors and active participation in all conferences and discussions dealing with matters that pertain to the plan. Jointly supported funds are more universally practicable. Experience shows that a larger proportion of employees contribute to jointly supported funds than to those which are run by the workers themselves. Apparently employees have greater confidence in the safety of a fund if management has a part in its maintenance and supervision. Also, there seems to be a freer use of the fund than in those cases where management alone imposes its own paternalistic scheme upon the workers.

It is always necessary to place certain restrictions on memberships. These should usually include preliminary physical examination and such subsequent examinations as may seem necessary; a short probationary period prior to final acceptance for membership; minimum and maximum ages within which an employee is eligible for membership; and refusal of membership to those who are venereally infected or who through drunkenness, self-abuse, or in other ways disqualify themselves from consideration.

Disability plans in railroad companies are generally known as "relief" plans and are usually administered by a "relief" department. In the Baltimore and Ohio Railroad Company, all employees under 45 years of age are eligible to membership in the company's relief plan. Contributions to the plan are determined upon a basis of wages. Five wage groups have been established: (1) those receiving not more than $35 monthly, who pay $1 monthly for first class membership; (2) those receiving $35 to $50, who contribute $2; (3) those earning between $50 and $75, who contribute $3 monthly; (4) those earning $75 to $100, who contribute $4 monthly; and (5) those receiving more than $100, who contribute $5 monthly. In return for these membership contributions, the following benefits are extended:

Cause	(1)	(2)	(3)	(4)	(5)
Accidental injuries, per day	$.50	$ 1.00	$ 1.50	$ 2.00	$2.50 (After 1st 52 weeks this benefit is cut in half)
For sickness, per day	$.50	$ 1.00	$ 1.50	$ 2.00	$2.50 (After 1st year same limitation; 7 day waiting period required)
For death:					
From accident	$500	$1,000	$1,500	$2,000	$2,500
From natural causes	$250	$ 500	$ 750	$1,000	$1,250

Retail establishments, power and light companies, insurance firms, educational organizations, oil companies, banks, and many other businesses commonly extend any one or all of these benefits in some varying degree to their respective employees. In many cases, as is true with commercial banks, the risks generally covered include death and total permanent disability but not sickness. These risks are almost always insured against in regular casualty insurance companies.

Group Insurance.—Individual life insurance is too expensive for most wage earners, and frequently they purchase a form of insurance in which the cost of collection by agents is such as to absorb a large part of the weekly or biweekly premium. At most, the benefit at death is only a few hundred dollars. This is partly why progressive employers have introduced the group insurance plan and trade unions are organizing insurance companies. Life insurance companies furnish group insurance at reduced rates, since there is little expense connected with its sale, and no medical examination is necessary. The employer is required to guarantee a certain standard of employment conditions, such as good drinking water, sanitary conditions, and safeguards against hazards to health and life. The occupation must not be extrahazardous.

A blanket policy is issued which covers the entire group to be insured, the insurance company being furnished a list of employees, with their ages, and the amounts of insurance provided. A certificate is given to each individual, which states the amount of insurance, the conditions under which it will remain effective, and the beneficiary. Some of the plans allow the employee to continue his insurance at regular rates even though he leaves the service of the company.

A large number of plans cover all employees, but in many cases only certain classes of employees are included. Usually, the entire cost is paid by the company, but sometimes it is shared equally by the company and the workers. Frequently the policy has a disability clause which provides payment for total disability before sixty or sixty-five years of age. The benefit may amount to a fixed sum, but the more satisfactory plan seems to be that which provides the payment of one year's salary or wages, with a maximum limit, the beneficiary to receive the amount in specified installments.

Group insurance appeals strongly to the men who cannot save for the future, to those who have reached an age where rates for ordinary insurance with private companies would be very high, and to those who cannot pass the physical examination. These facts explain why employees in so many cases have shown deep appreciation of group insurance. Employers state that the provision of insurance under this plan has reduced the percentage of labor turnover perceptibly and has conduced to more harmonious employment relations.

Mutual Benefit Associations.—Employers are now convinced that transient workmen increase the cost of production, interrupt the smooth operation of the productive organization, and are generally a detriment to the company. Such employees cannot give the proficiency which experience and familiarity bring. The various personnel services discussed in the preceding pages are designed to increase length of service, reduce labor turnover, enhance the efficiency of the organization, eliminate wastes, and promote industrial good will.

Such objectives are seldom achieved through the old paternalistic methods of welfare service in which all the activities are provided and controlled solely by management. This is the reason that, in recent years, there has been organized in many companies the mutual benefit association, the function of which is specifically "to foster a fraternal spirit among its members, to give relief for disability through sickness or accident, to provide death benefits, and to assume general supervision over the activities which concern the welfare and progress of the workers." Such associations make possible some form of joint administration of welfare services. Actual management is customarily in the hands of a board of directors or trustees comprising representatives of the company and the workers, the former being appointed by the management and the latter elected by the eligible employees. The governing board is given power to elect such officers as may seem advisable for the conduct of the work. It has authority to receive and invest funds, to apply the income of such investments and, if necessary, the principal of the same to the payment of pensions, sick benefits, and death benefits, subject to the provisions of the constitution and by-laws governing the plan. Joint administration has done much to eliminate many of the objectionable features of the old paternalistic methods and to that extent has weakened the traditional criticism of welfare plans.

PART V

CIVIL SERVICE PERSONNEL

CHAPTER XXXI

LABOR RELATIONS IN THE CIVIL SERVICE

Importance of Public Service.—Governments exist as the instrumentalities of law and order. Their general functions include the protection of life and property and the promotion of economic and social well-being. Upon the shoulders of public employees falls the burden of assuming these grave responsibilities. Only to the extent that competent and trustworthy servants are chosen, trained, and disciplined, can these responsibilities be fulfilled. It is extremely important that public employees be fairly remunerated, made comfortably secure, and encouraged to continue to put forth their best efforts in the interest of social well-being.

In the fulfillment of these functions, men and women employed by various governmental agencies are called upon to do many things. Some keep clean the nation's streets, dispose of refuse, and maintain public health and sanitation. Many others build and patrol our highways, protect our forests and other natural resources, and guard against accident and fire. Others serve the poor, instruct and train our youth, administer our laws, and protect established standards of conduct and service. A few are called upon to supervise the work of the thousands needed in the performance of these tasks. During war, economic depression, or other national calamities, these duties are often greatly expanded in defense of public welfare. Briefly, "government is a cooperative enterprise exceedingly complicated and difficult, and supremely important to everyone of us, rich or poor, employed or unemployed, wherever we live. We must have government to live, to work, to advance, to enjoy the fruits of our labor."[1] And it is the task of the *civil service agencies* of the nation to select, train, and maintain the army of individuals needed to do the major share of this work. This is a formidable task because it involves the placement and maintenance of those who are qualified to do the work most effectively.

Extent and Nature of Civil Service Employment.—Problems of human relations are very much the same in all types of employment, public or private, profit making or charitable. But in public employment, many policies are determined by law rather than by progressive or enlightened voluntary choice; and many selections and placements are made upon the basis of politics rather than upon scientific principles. Civil service employment is an important factor in moulding general principles of personnel procedure, although there are to be found in this field of employment many problems that are peculiar only to public service. For many years, the federal government has been the largest single employer in the country. On the average, one person in every thirty throughout the entire nation is directly employed by federal, state, county, or municipal governments. This army of workers constitutes one-tenth of all those gainfully employed and normally receives one-tenth of the total national income.[1] In 1932, no less than 175,418 separate political jurisdictions, including the federal government, the forty-eight states and the District of Columbia, 3,053 counties, 16,366 incorporated municipalities, 127,108 school districts, and 28,842 townships, villages, and other civil divisions[2] maintained under full-time employment more than 3,250,000 employees with a total payroll for the year of over $4,750,000,000. Four years later, in 1936, the number of public employees (excluding those on work-relief programs) had increased to an estimated total of over 3,625,000 who received in salaries and wages over $5,145,000,000. The distribution of these workers among the various divisions of government is set forth in Table 15. Approximately 30 per cent of all public employees are on the payrolls of the federal government; another 30 per cent are maintained by the public school system of the nation.

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[1] Commission of Inquiry on Public Service Personnel, *Better Government Personnel*, 1935, p. 15.

The federal government has steadily increased the total number of workers employed in its various departments (except for legislative, judicial, and emergency relief employees and military and naval forces) from a total of 578,231 in 1932 to 841,664 in 1937. It is at present more than ever the largest single employer in the nation. Of the sixty-six federal departments or establishments the Post Office Department is the largest in numbers, accounting for a total of 279,443 employees at the close of the fiscal year, June 30, 1937.[3] Other important federal branches include the Department of War with 87,977 civilian employees, Agriculture with 85,143,

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[1] *Ibid.*, p. 91.

[2] *Ibid.*, p. 87.

[3] *Fifty-Fourth Annual Report of the United States Civil Service Commission*, 1937, p. 80.

TABLE 15.—ESTIMATED NUMBER AND TOTAL COMPENSATION OF PUBLIC EMPLOYEES, 1929–1936[1]

Year	Federal[2]	State	City	County, township, and minor civil divisions	Public education	All public employees
Number of employees						
1929	861,995	248,200	719,291	269,358	1,090,433	3,189,277
1930	872,951	262,245	737,900	277,417	1,165,914	3,316,427
1931	880,432	275,672	702,098	272,766	1,242,728	3,373,696
1932	863,970	282,041	684,374	270,521	1,170,389	3,271,295
1933	855,876	287,134	640,304	259,543	1,157,256	3,200,113
1934	941,510	300,276	643,161	264,572	1,153,211	3,302,730
1935	1,049,943	321,279	648,862	270,413	1,152,390	3,442,887
1936	1,167,043	332,802	674,342	285,461	1,165,681	3,625,329
Salaries and wages (000's omitted)						
1929	$1,397,841	$321,863	$1,116,657	$376,159	$1,510,873	$4,723,393
1930	1,424,964	342,597	1,193,550	386,432	1,590,963	4,938,506
1931	1,443,631	361,919	1,137,923	382,014	1,621,269	4,946,756
1932	1,359,331	361,515	1,110,867	376,861	1,545,275	4,753,849
1933	1,221,607	350,571	933,968	330,932	1,464,067	4,301,145
1934	1,415,212	360,808	953,784	337,314	1,401,359	4,468,477
1935	1,678,166	392,986	975,732	350,601	1,376,967	4,774,452
1936	1,893,421	409,115	1,040,458	371,603	1,431,276	5,145,873

SOURCE: Adapted from The Civil Service Assembly of the United States and Canada, *Civil Service Agencies in the United States*, Pamphlet 11, January, 1938, p. 5.

[1] Including military services.

[2] Excluding employees on work relief programs.

Treasury with 74,005, Navy with 71,667, and Interior with 43,176 civilian workers. Then follow in order the Department of Commerce, 15,909; Labor, 14,620; Justice, 8,228; and State, 5,364. Among the more important independent establishments of the United States Government are the Veterans' Administration employing 35,054 civilian employees on June 30, 1937; the Works Progress Administration employing 30,234; the Home Owners' Loan Corporation with 14,966; the Tennessee Valley Authority with 13,766; and the Panama Canal with 10,236.[1]

Not all public employees are appointed to the "classified" public service under civil service examinations. Within the employment of the United States Government, a total of 532,073, or 63 per cent, of all employees in the executive branch were, on June 30, 1937, in positions subject to the civil service competitive requirements. This means that 309,591 or 37 per cent of all civil servants were in positions not subject to these competitive classified requirements.[1] There has been announced, however, a definite policy on the part of the federal administration calling for an increasing proportion of the federal employees to be appointed to the public service upon a competitive basis. This is indicated by the fact that during the fiscal year ending June 30, 1937 there occurred an increase of 33,348 employees in classified positions and a decrease of 15,943 employees in nonclassified positions.[2]

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[1] *Ibid.* These figures include only civil employees in the executive branch paid from regular funds and administrative employees paid from emergency relief appropriations.

Almost every major occupational classification is represented in carrying on the broad public service work throughout the country. The federal Personnel Classification Board found that federal service, excluding postal and foreign service, involved some 1,633 different classes of positions.[3] These included over "one hundred distinct professional and scientific occupations; thirty-nine occupations placed in the so-called 'sub-professional' group; eighty different occupations in the clerical, administrative, and fiscal group; one hundred and four distinct types of mechanical crafts, trades and custodial occupations; twenty-six distinct types of inspectional and investigational work; and some other occupations in the educational services and in light-keeping and depot-keeping—a total of over 350 occupations."[4]

This broad sweep of occupational classifications is found also in the other jurisdictional divisions of civil service. Among the 15,000 civil service employees of Los Angeles County (excluding city employees) in January, 1938, over 1,000 separate job classifications were maintained, covering work activities ranging all the way from street sweeping and garbage collecting to the highest type of professional and administrative occupations. Among California's 10,000 state civil service employees, some 1,500 job specifications cover a range equally as wide.

Recent Trends in Government Personnel.—The traditional handling of personnel problems of government service, aside from those directly involving selection and placement under civil service examination, in the past has been a responsibility of "chief" or

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[1] *Ibid.*, p. 8.

[2] *Ibid.*

[3] Reeves, Floyd W., and Paul T. David, *Personnel Administration in the Federal Service*, Government Printing Office, 1937, p. 32.

[4] *Ibid.*

TABLE 16.—NUMBER OF EMPLOYEES UNDER CIVIL SERVICE as of June 30, 1932[1]

Jurisdiction	Total number of employees	Employees under civil service		Employees chosen by fixed standards	
		Number	Per cent	Number	Per cent
Federal	934,000	456,096	48.8	266,379	28.5
State	252,000	96,750	38.4		
Municipal	591,500	350,000	59.2		
County, township, and district	312,000	45,000	14.4		
Public education	1,189,000	....	....	1,189,000	100.0
Total	3,278,500	947,846	28.9	1,455,379	44.4

SOURCE: Commission of Inquiry on Public Service Personnel, *Better Government Personnel*, p. 92.

[1] These figures cannot be reconciled completely with those for 1932 presented in Table 15 because both sets (with the exception of the numbers of federal employees) are estimates calculated upon slightly different bases. The number of federal employees set forth here is slightly larger than that given in Table 15 because Table 16 is composed of both permanent and temporary federal workers, whereas Table 15 presents only the number of permanent employees.

"appointment" clerks. All important personnel functions were matters of general administration. Under this system, it was the duty of the chief clerks to take care of problems of a more or less routine nature, consequently detailed personnel records of most offices were kept by appointment clerks. Now, however, especially among the newer agencies of the government, the principles and techniques of modern personnel administration are slowly being recognized, and government service (not only federal, but state and local as well) has taken an active part with the more progressive private companies in the application of this new science. A number of the larger divisions in Washington, such as the Department of Labor, have centralized their personnel work under special directors. These officers are usually classified in salary grades which provide for entrance compensation of between $3,800 and $4,600 per year. In a few instances, gradings provide an entrance salary up to $6,500.[1] The Department of Agriculture, for example, in announcing a reorganization of personnel and an appointment of a personnel director on May 17, 1934, issued a memorandum stating:[2]

> He will be the general agent and representative of the Secretary of Agriculture in personnel, salary classification, organization, and related

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[1] REEVES and DAVID, *op. cit.*, p. 33.

[2] *Ibid.*, p. 34.

matters and will exercise general oversight and supervision of the personnel and related activities of the Department. The Director of Personnel will conduct the business of the Department with the Civil Service Commission and where personnel matters are concerned with other agencies doing business with the Department of Agriculture.

The work of such a personnel director in governmental service, it must be remembered, is often limited by the provisions of civil service law or code. Thus his activities are likely to be somewhat inflexible. However, public service work is nonprofit making, and for this reason government personnel often offers more opportunities than are available by the same work in private industry. This peculiar nature of governmental personnel administration often gives rise to important procedures which have not been encountered in our review of the practices and the policies found in industry and business. It should be noted also that the trends in the federal service are often duplicated in the development of improved personnel administration in smaller governmental jurisdictions. Some local and state governments at present are supporting personnel departments or bureaus that rank among the most progressive types of personnel organizations and which, through the research done by staff members, are contributing much to this new field of science. The work being done by certain state civil service commissions and various county and city bodies in which the possibilities of a *career service* are recognized is contributing greatly to improved personnel procedure. But, unfortunately, "the chief clerk of twenty years ago still reigns supreme, even though he may be camouflaged by a new title connoting all that is desirable in modern personnel methods."[1]

Misconceptions Regarding Civil Service.—The Commission of Inquiry on Public Service Personnel has called attention to certain fallacies in American thinking on governmental personnel which are largely responsible for the failure of well-qualified persons to enter the field of public service. The committee points out ten current misconceptions:[2]

1. The false notion that "to the victor belong the spoils." This is not a doctrine of real democracy.
2. The mistaken idea that the duties of governmental employees are (as President Jackson said) "so plain and simple that men of intelligence can readily qualify themselves for their performance."

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[1] Quoted in Reeves and David, *op. cit.*, p. 35, from John E. Devine, *Post-Entry Training in the Federal Service*, p. 10.

[2] Commission of Inquiry on Public Service Personnel, *op. cit.*, pp. 16–20.

3. The false idea that charity begins on the public payroll..

4. The erroneous assumption that "patronage is the price of democracy," that the parties which we need for self-government cannot exist without spoils.

5. The idea that "the best public servant is the worst one."

6. The erroneous thought that "tenure is the cure of spoils.".

7. The superficial thought that the way to eradicate spoils and favoritism is to begin at the bottom with the clerks, stenographers, and policemen, and work up, and that the success of reform can be measured by the percentage of the total service which is placed "under civil service."

8. The belief in "home town jobs for home town boys.".

9. The notion "that the public service is always less capable and efficient than private enterprise."

10. The erroneous idea that the spoils system, the eleemosynary system, and the other corrosive influences can be driven out of the public service through the prohibition of specific abuses.

Earnings of Civil Servants.—The earnings of public employees are low, but they are relatively steady compared with those of industrial workers. The average per capita income of all employees actively engaged in the federal service for the year 1932 was estimated at $1,448.[1] However, this average covers a wide range; the actual distribution of salaries, as shown in Table 17, is more indicative of earnings among the various classifications. It will be seen that only 4 per cent of the 714,232 federal employees received a salary of $3,000 or more during 1933, while 47 per cent received less than $1,500 during the year. Since the latter figure, as the table shows, includes all the federal enlisted personnel where earnings are very low, a better basis of comparison is to be found in one of the other large classifications such as postal or executive service.

The earnings of nonfederal public service employees are quite close to those of federal workers. Table 18 sets forth the trend of average earnings of municipal employees prior to and during the last depression period. The difference between money wages and real wages is clearly presented by these data and emphasizes one of the strongest points of attraction which permanent salaried positions offer over day and weekly wages. During periods of depression, day and weekly wages, even many monthly wages paid in private industry, tend to be adjusted more quickly to the downward swing of the business cycle than do earnings in public service which are often placed upon an annual basis and established by law.

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[1] 73d Cong. 2d sess., S. Doc. 124, p. 129, quoted by Commission of Inquiry on Public Service Personnel, *op. cit.*, p. 167.

TABLE 17.—CLASSIFICATION OF FEDERAL EMPLOYEES BY ANNUAL SALARY RATES, FISCAL YEAR ENDED JUNE, 30, 1933

Salary range	Legislative establishment	Judges, United States courts	Executive department, Field & District of Columbia, except postal field service	Postal field service	Commissioned and enlisted personnel	Total
Total number	8,605	231	204,133	244,080	257,183	714,232
	% of total	% of total	% of total	% of total	% of total	% of total
$15,000 and over.....	0.2	3.9	0.1	.....	.....	0.03
10,000–15,000......	6.3	92.2	0.2	0.02	.....	0.11
5,000–10,000......	0.6	3.9	1.0	0.48	1.0	1.66
3,000– 5,000......	4.9	.....	8.2	1.50	2.9	4.00
2,000– 3,000......	41.6	.....	25.0	69.30	4.3	32.90
1,500– 2,000......	23.4	.....	26.3	13.10	5.4	14.30
1,020– 1,500......	19.5	.....	26.2	3.50	10.2	12.60
Less than 1,020......	3.5	.....	13.0	12.10	76.2	34.40
Total..............	100.0	100.0	100.0	100.00	100.0	100.00

SOURCE: Adapted from message to the President of the United States, transmitting the budget for the service of the fiscal year ending June 30, 1935, pp. A-121 to A-129, and Commission of Inquiry on Public Service Personnel, *op. cit.*, p. 168.

TABLE 18.—ESTIMATED TREND OF AVERAGE ANNUAL EARNINGS OF FULL-TIME PERMANENT EMPLOYEES, ALL MUNICIPALITIES OVER 2,500, 1926–1932

Year	Estimated number of full-time employees	Estimated total, annual compensation	Average annual earnings	
			In current dollars	In 1914 dollars
1926	593,845	$858,857,000	$1,446	$831
1929	650,158	973,851,000	1,498	876
1930	710,073	1,078,137,000	1,517	914
1931	624,046	981,624,000	1,573	1035
1932	591,505	895,539,000	1,514	1105
1933 (Est.)	....	....	1,259	961

SOURCE: Commission of Inquiry on Public Service Personnel, *op. cit.*, p. 165 (educational employees excluded).

The data presented in Table 19 further indicate the significance of money and real salary trends among fire and police department employees in larger American cities during the past three decades.

TABLE 19.—MOVEMENT OF AVERAGE ANNUAL COMPENSATION OF EMPLOYEES OF POLICE AND FIRE DEPARTMENTS, CITIES OVER 30,000, 1925–1932

Year	Average annual compensation			
	Police departments		Fire departments	
	Current dollars	1914 dollars	Current dollars	1914 dollars
1905	$1,072	$1,292	$1,066	$1,284
1907	1,059	1,164	1,097	1,205
1929	2,263	1,323	2,286	1,337
1930	2,276	1,371	2,312	1,393
1931	2,451	1,613	2,420	1,592
1932	2,324	1,696	2,299	1,678

SOURCE: Commission of Inquiry on Public Service Personnel, *op. cit.*, p. 166.

Structure of the Federal Civil Service.—Over 360 different civil service commissions and other personnel agencies administer the federal civil service laws and help in the selection and maintenance of civil service personnel. Several important agencies now serve in the supervision of personnel among the federal employees. Although the chief executive is highly responsible for the major personnel functions within the authority of the executive branch of the federal government, because of his many pressing duties he usually acts in an advisory capacity only, and causes to pass through the Bureau of the Budget all rules and policies relating to personnel procedure within that department. Since the Bureau of the Budget is responsible for the allotment of funds throughout the executive branch of the government, it reviews both the number and the compensation schedule of the personnel proposed for each activity. In this way, the bureau exerts an important influence upon personnel administration throughout this part of the federal service.

The Federal Civil Service Law, except for certain amendments, was passed in its present form in 1883. It creates the Federal Civil Service Commission, by far the most important body in the administration of government personnel. This commission is composed of three members, appointed by the President with and by the consent of the Senate, with authority to aid the chief executive in preparing rules of service, controlling entrance and promotion examinations, and making investigations. All employees performing "classified" tasks come under the scope of the act. Legislative and judicial officers, special appointments confirmed by the Senate, and laboring classes are exempt from the law. Recruitment by means of written civil service examination is established in respect to most appointments; a few of the higher positions are filled by special "unassembled" examinations which usually require the submission of a history of experience, references, and a full list of publications or accomplishments.

Appointment under federal civil service is "according to grade from among those graded highest," but in certain emergency cases temporary appointments are permissible without civil service ratings, and a specified probationary period must be served before appointment becomes final. Salaries are standardized under the Classification Act which has established a salary schedule for each classification under the service. Efficiency ratings are determined by the commission and are made by department heads. Promotion is by means of other civil service examinations, and necessary transfers are permitted provided the commission has been notified and proper records have been made. No provision is made in the law itself for reinstatement. Removal and discharge are initiated by the appointing authority. Notice of such action is required, and a copy of charges must be submitted, to which answers in writing may be filed. Hearings in such cases are held at the discretion of the appointing authority, and any cause promoting the efficiency of service is proper ground for them. Tenure remains until removal or retirement, and the only discrimination allowable is the extension of veteran preference in matters involving appointment and layoff.

The powers and duties of the Civil Service Commission are summarized by the President's Committee on Administrative Management:[1]

> The administrative work of the Commission's establishment includes the operation of the central recruitment and examining service for Federal positions within the classified competitive civil service, the administration of the Federal retirement system, and the administration of review and control activities in position analysis and salary standardization for the "departmental" service at Washington. The Commission passes upon certain classes of transfers of civil service employees, particularly interdepartmental transfers, and also passes upon proposed promotions and reinstatements of such employees. The Commission's relationship to

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[1] Reeves and David, *op. cit.*, pp. 4–5.

> placement, transfer, promotion, and reinstatement, however, is primarily the negative one of making sure that the civil service rules are not violated.
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> The Commission has authority to adopt administrative rules and regulations governing various matters, although its authority to adopt regulations under the Civil Service Act is subordinate to the rule-making authority of the President. The Commission, directly, and through its Board of Appeals and Review, hears numerous appeals from decisions of its own staff on examining, retirement, personnel classification, and other matters. It is not a central board of appeals of general jurisdiction in Federal employee matters. The Commission has certain investigative and disciplinary functions, particularly in relation to improper political activity on the part of civil service employees. It carries on a limited developmental program, designed primarily to improve the quality of its examining methods, but does not appear to give much attention to the organization or quality of personnel administration in the operating agencies.

The work of this body influences hundreds of thousands of individuals each year. During the fiscal year ending June 30, 1936, the commission employed a staff of 1,048 permanent employees and 188 temporary or emergency employees in the central and thirteen district offices throughout the United States. These district offices supervise the work of some 4,500 local boards of civil service examiners, who, during 1935, examined a total of 466,288 applicants for positions from whom 40,725 appointments were made. Examinations are normally held for over 1,700 different classifications of jobs. In 1935, the number of applications received for one position alone—that of railway postal clerk—totaled over 200,000 in the course of a few days. Because of the changes in duty and responsibility of assignments, the commission's work in personnel classification is a continuous process. During the year 1935, over 26,000 position descriptions were received for review, changes in which reflected adjustments of salary schedules. The number of departmental positions under its control increased from 45,431 in 1933 to 70,478 in 1936. Many of the commission's efforts are absorbed in the administration of the Retirement Act.

Besides the administrative functions, as suggested by these references to duties and activities, the Civil Service Commission performs important rule-making, appellate, and developmental functions. Subject to civil service rules as established by law or that may be made by the President as provided by law, the commission has power to determine "every detail of policy, practice, and procedure" relative to examinations. Its appellate functions, carried on through the Board of Appeals and Review established in

1930, include the receipt and consideration of, and the rendering of decisions upon, complaints relating to examination grading, retirement, disqualification for examination, compensation ratings, and other difficulties that arise in the placement and service of government employees. Developmental functions include the perfection of tests for selection, improvement of the federal retirement system, and the development of techniques and methods leading to the improvement of personnel administration. In the field of selection tests, the commission has done outstanding work, having developed effective means of testing for various occupational groups, such as postal clerks, policemen, firemen, and stenographers.

The commission is thought to have done its most effective work in the administration of assembled examinations for positions which are highly standardized, in personnel control classification, and in the supervision of the federal retirement system.[1]

The chief criticisms are directed at the delay with which it carries on its task of selection and placement (sometimes 6 months or more elapse between the time examinations are given and the announcement of results), and its apparent failure, especially among the older branches of government which it serves, to solve the many new problems within the field of the scientific management of men. It holds a strategic position in the field of industrial relations and personnel administration, yet in too many cases antiquated policies are still enforced. It has also failed to provide well-chosen, properly qualified persons for higher professional and administrative positions and to respond satisfactorily to the increased needs for government service brought on by business depressions. In the words of the President's Special Committee:

> The Commission has shown relatively little tendency to interest itself in the constructive and developmental activities of an adequate central personnel agency. Its major interest appears to remain in the negative and restrictive activities attendant upon the enforcement of the civil service laws and rules, rather than in a positive and cooperative approach toward improved recruitment, placement, training, and morale-building activities. It is questionable whether the Commission in its present form of organization is capable of such a positive approach.[2]

Other Personnel Functioning Bodies of the Federal Government.—Other agencies of the executive branch of the federal government that have responsibility for personnel functions are the

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[1] *Ibid.*, p. 5.

[2] *Ibid.*

Council of Personnel Administration, the United States Employees' Compensation Commission, and miscellaneous agencies, including the United States Public Health Service, United States Employment Service, the United States Bureau of Labor Statistics, and the Office of Education. The Council of Personnel Administration was created by executive order in 1931, and its chairman is, ex officio, the president of the Civil Service Commission. This council serves as an interdepartmental investigation and research body and makes recommendations to the Civil Service Commission concerning improved personnel policies and procedures for the civil service. Its most valuable service to date has been in the development of an improved employee rating system, recently introduced into the civil service system. There are many deficiencies of the present system that this body, if effectively used, is capable of bringing to light and helping to overcome.

The United States Employees' Compensation Commission administers the Federal Employees' Compensation Act of 1916, a law providing for compensation to employees in the federal service (or their dependents) in case of death, disability, or injury, while performing their duty. This commission is an independent body of three members, and has no statutory powers in regard to accident prevention and safety programs for the protection of federal employees. During recent months it has, nevertheless, been interested in such a program, but, without jurisdiction authorized by law, its services in this connection will continue to be of doubtful value. The United States Public Health Service has done some notable work in making special studies relating to occupational diseases, health, and sanitation. This agency is at times also responsible for administering physical examinations to candidates for federal service. The United States Department of Labor, through the Bureau of Labor Statistics, offers valuable service to the Civil Service Commission by reporting on federal employment trends in the cost of living and, from time to time, making comparative analyses of personnel policies followed in various American industries. The United States Employment Service, in cooperation with the state employment service bureaus, aids in the recruitment of service employees. The Office of Education offers some facilities for the training of federal employees, and deals with certain problems of vocational guidance and adult education.

It is apparent from this brief outline of the duties of the several agencies responsible for the major personnel functions involved in federal service employment that these functions are decentralized and, in many ways, uncorrelated. The President's Committee on Administrative Management fully recognized these deficiencies, and has made strong recommendations concerning the improved organization for personnel administration and for the extension of the merit system. In part, this committee reports:[1]

> The extension of better practices throughout the entire Federal service is not going on as rapidly as might be desired. Progress may be noted in many instances where individual administrative officers have taken responsibility and exercised initiative. In other instances, it seems likely that no considerable improvement in personnel methods will take place in the absence of aggressive central stimulation and assistance.

And again:

> Emphasis upon good personnel should not be allowed to minimize the emphasis that properly should be given to sound organization. Both problems are of major importance, and in fact interlock. It is difficult to attract good personnel to an organization that is faulty in structure, and it is likewise difficult to improve the structure of organization without the assistance of good personnel through whom to work. . . . [2]

And according to the Commission of Inquiry on Public Service Personnel, what is now needed in all public service work—federal, state, county, and local alike—is "the transformation of the public service to a career basis" wherein civil service is entered as a life work, and a career service so organized and conducted that careers in public service will be encouraged.[3] The details of such a plan will be considered later.

Personnel Policies in the Public Service.—The thousands of different tasks involved in the successful performance of public service fall logically into a few broad classifications. First, there are unskilled tasks, requiring no trade skill and training, which in federal service alone normally provide employment for some 100,000 persons. These laborers are employed on road building, protection of natural resources, sewerage and sanitation construction, and projects of a somewhat similar nature. Second, are those tasks which require skilled craftsmen such as carpenters, contractors, masons, electricians, and printers. Third, there is a large volume of clerical work involving the compilation, filing, and classification of papers and reports. Fourth, many governmental functions require the services of professionally trained individuals, such as research workers, lawyers, chemists, social workers, engineers, and public instructors, whose special scientific training makes their services of great value in dealing with special problems of government. Finally, there are the executive and administrative positions which are filled by those who are responsible for the administration and smooth functioning of all public service agencies. The last class may be thought of as the managers of the business of local, state, and federal governments.

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[1] *Ibid.*, p. 6.

[2] *Ibid.*, p. 1.

[3] **Commission of Inquiry on Public Service Personnel, *op. cit.*, p. 25.**

Because of the peculiar nonprofit-making motives of public employment, civil service offers unusual opportunities for the development and application of enlightened personnel procedure in all matters of industrial relations. A brief review of the major personnel functions as they are now commonly practiced may serve to indicate in greater detail the extent to which these progressive policies are applied. Such a review will also indicate the phases of government work from which scientific personnel procedure is absent. Our discussion can merely suggest the possible application of progressive personnel policies among the more than 176,000 public employers throughout the nation.

Recruitment and Selection.—The plan of recruitment will determine the efficiency of civil service. All public employees are either appointed to their positions under political patronage or under a system of prescribed standards; or else they are selected by means of competitive *assembled* or *unassembled* written and oral examinations. When appointment is by examination, civil service bodies usually issue bulletins announcing the type of position to be filled. The bulletin sets forth the date, place, and purpose of the examination; location of employment; information relative to age and sex qualifications; entrance salary; typical tasks; minimum requirements; and the scope of the examination, including the affixing of weights for individual qualifying factors. In announcing a civil service examination for student personnel assistant, a recent California state civil service employment bulletin described the typical tasks and minimum requirements of the position thus:

> *Typical Tasks:* Gathering facts needed as a basis for making adjustments in the classification and compensation plans for the State Service; reviewing questionnaires and statements of duties and interviewing department and institution officers to ascertain the duties and qualification requirements of proposed new positions; drafting tentative class specifications; gathering, tabulating and analyzing compensation, cost of living and other data; scoring short answer written tests, assisting in the preparation of test material and in giving tests; observing the manner in which oral interviews and practical performance and physical tests are conducted; assisting

in securing reports to be used as the basis for service ratings and appraising or translating such reports into letter or other ratings; tabulating data relating to annual, sick and special leaves of absence and various types of separations; observing the methods used in keeping personnel records; maintaining employment lists, and making certifications and assisting with the actual performance of such work; making investigations or special studies and preparing reports thereon; assisting in carrying on research work relating to some major phase of public personnel administration; attending classes in an educational institution and doing the preparatory and other work required in connection therewith.

Minimum Requirements: Education equivalent to that represented by graduation from college with specialization in political science, psychology, education, statistics, and/or economics, high standing in the major selected in the university; knowledge of the general concepts of government, public administration, economics, statistics, and psychology; ability to use good English; ability to size up situations and people accurately and to get along well with others; willingness as a learner to do routine or detail work in order to learn the practical application of the principles of personnel administration; pleasing personal appearance; accuracy; integrity; tact; and good judgment.[1].

The above statement presents the method of recruitment adopted by the most progressive states, and suggests the general nature of personnel work under civil service boards.

Most civil service bodies are responsible for the development of written examinations, and for the conduct of oral examinations, upon the basis of which eligible lists are established. While these examinations are administered in various ways, they must be carefully drawn up and fairly given. Assembled written examinations are usually given to large numbers of applicants simultaneously, and occupy a period of two to three hours. Questions are formed by skilled personnel officers or specialists and are designed to measure as adequately as possible the acquired knowledge and training of the applicant. Sometimes written examinations consist of a series of "true" and "false" questions; other times various types of questions and problems are given, depending upon the requirements of the position and the qualifications desired. In an examination for deputy registrars and regional district supervisors given during the summer of 1936 by one of the state civil service boards, for the purpose of establishing an eligible list for the state department of employment, the written examination was composed of true-false questions divided into thirteen different parts. The first question of each part was:

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[1] From *Bulletin* 206, July 18, 1936, issued by the California State Personnel Board.

Unemployment Insurance is a misnomer insofar as it is applicable to the United States. *T* F

The adoption of compulsory unemployment insurance was first realized in 1911 in Great Britain. *T* F

The American Federation of Labor has always been in favor of an unemployment compensation program administered by the state. T *F*

The term "Unemployment Insurance" is improper insofar as this subject relates to legislation in this country. The proper term is Unemployment Compensation. *T* F

Title IX of the Social Security Act relates to Unemployment Compensation. *T* F

The Statute of this state was enacted solely for the purpose of providing a reserve fund to pay benefits to eligible employees, and it is not intended that stabilization of employment be encouraged by this legislation. T *F*

There are approximately 300 fee-charging Employment Agencies in the State. *T* F

Hotel bills must be separated into daily amounts and shown on the expense form, daily. T *F*

The employee contribution is .50 of 1 per cent. T *F*

Form CURC 3 was developed for use of field men. T *F*

Employers that are not subject to the Act are not required to register. T *F*

The Federal Government assists the States in the Administration of their unemployment compensation laws through the use of grants. *T* F

The first use of the reserve principle was applied by__________ __________ in the city of__________.

In addition to the written civil service examination, many examining bodies require that an oral examination be given by an interview board of three to five members. In such cases, only those passing the written examination appear for oral interview. The final grade for each candidate represents a composite of these ratings. The oral examination is highly desirable, since it gives an opportunity to observe at firsthand the applicant's personal features, mannerisms, appearance, reactions, judgment, and many other important characteristics that cannot be set forth on paper.

The selection method of different types of public service work varies considerably. One interesting division of the federal government is the Federal Bureau of Investigation, known the world over for its unusual personnel. Many are attracted by the glamour of "secret service" work, and the bureau constantly faces the task of most scrutinizing selection and rigorous training. When applications for positions in the Federal Bureau of Investigation are received in Washington, they are distributed among the thirty-seven field division offices of the bureau. Members of the bureau arrange for personal interviews and written examinations for each applicant in the various parts of the nation. The applicant appears personally and is given a written examination which tests his ability to analyze a given situation, apply facts to a statute in question, and prepare an intelligent report of his findings and conclusions. During the interview the applicant's personal qualifications, education, experience, resourcefulness, aggressiveness, tact, energy, and probable general ability as a special agent are carefully observed.

Those who successfully pass the oral interview and written examination are investigated as to character, reputation, integrity, moral standing, types of associates, and all other factors affecting the applicant's fitness to do the work well. Those who successfully pass the final checkup examination are placed on the eligible list for bureau service and are called upon in the order of their final ratings. The entrance salary in this service is $3,200 per year, and age limits are twenty-five to thirty-five years. A broad general background is essential. The successful applicant must have completed legal training, be an expert accountant, or have had a constructive type of law enforcement experience.

Civil Service Training.—There are perhaps as many types ot training programs as there are public service agencies, although in only a very few are training programs effectively and scientifically maintained. Three broad types of training are available to public service employees: the *pre-entry* training, the *internship,* and the *in-service* training.

Pre-entry training is sometimes of a formal educational type, and it is sometimes of a special detailed knowledge-building type. Pre-entry educational training programs are usually worked out with some institutions of higher learning or by means of some special cooperative course work offered by a local managers' association in conjunction with interested parties. Only a few universities in the United States offer special training courses, and many times the liberal arts or special university training work is used in the building up of a proper program.[1] Concerning the problems of university undergraduate training courses in relation to the public service, a special report of the University of Wisconsin says, in part:

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[1] For the results of an experiment in the selection of civil servants from liberal arts colleges, see Leonard D. White, *Government Careers for College Graduates,* June, 1937, published by the Civil Service Assembly.

> What is really desirable in the undergraduate field is the provision of some person or group familiar with the administration of personnel in the public service and able to advise the undergraduate concerning his course of study and concerning future opportunities. In large measure this work must be in the best sense of the word inspirational in that one can perhaps indicate to the student how he may obtain a broader and richer background for his later special training.
>
> Such advice and guidance should be of greatest value in assisting the student who may have become interested in the public service in the planning of his work during the junior and senior year, or in a combined B.A. and M.A. program. We should not overlook the fact also that the same fundamental liberal education which would be useful for the future public servant will also be most useful for those entering industry and the professions. If a student pursues such a general course, he will not be confronted with a type of educational preparation which is suitable only for a single occupation or employment.[1]

The same conviction is borne out in other recent reports. The recommendations made by the Committee on Training for the Public Service states that "with the increasing tendency for a program of preparation for the public service to cut across more than one of the regular professional or technical schools and of the arts and social science departments, and with the impracticability or undesirability of having each separate school add new courses to its curriculum, special arrangements should be made to permit individual students to supplement their regular work by additional or substitute courses in other schools or departments."[2] It must be added, however, that there is real need for advanced work and postgraduate seminars in public administration. Noteworthy responses to this need have already been made by the establishment of schools of government and bureaus of public administration in several universities throughout the country.

But training work of this type has only begun. The personnel director of one of our large municipal agencies has indicated some of the glaring shortcomings of our present system:

> If our textbooks in accounting practically ignore the special problems of government, if courses in commerce are completely orientated toward

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[1] International City Manager's Association, *Training for Municipal Administration*, 1936, p. 11.

[2] Public Administration Clearing House, *Public Administration Service*, no. 49, 1935, p. 17.

private rather than public business, if courses in English and literature omit all reference to government reports, if bookkeeping is taught as though there were no field in which profit and loss is not a dominating consideration, who is to blame?[1]

Internship and apprenticeship training are little used but badly needed. There is a basic difference between these two methods of training, although in certain respects they permit of similar classification. The traditional concept of the intern is now applied in the field of public service as it has been used for many years in medicine. It is felt that in preparation for many public service tasks, the interns should be learners under the close tutorage of older well-versed instructors. Their work should not be routine in nature, but similar to that of junior executive training in private industry. This type of training must not be considered direct training for public service, since the intern is being "farmed-out" to a center of activity for the purpose of aiding in special research and other problems. There must not be definite commitments for jobs after the internship is completed. Final action must await the results of internship.

In many ways, the apprenticeship training for public service follows the same general pattern as internship. The basic distinction between these two types of training is that in internship no commitments are made as to future appointments and little, if any, salary is allowed; while in apprenticeship appointment is made under regular or special procedure and carries a standard salary rate with the possibility of permanent appointment after the training period has been finished. Each year, there are thousands of college graduates and other young people who have thought of public service as a career and who are taken into various public service positions upon an apprenticeship basis under which, during a trial period, they have an opportunity to test their fitness for and interest in the service.

The greatest difficulty with this type of training is in the lack of uniformity with which such programs are initiated and maintained. Almost every training plan is different; there is no common aim and goal among the many public employers who are attempting to maintain apprenticeship programs. Only a few of the larger and more important government employers are conducting these programs upon an acceptable, scientific basis. Nevertheless, there is a growing consciousness of the need, and more uniform programs are gradually being formed. An interesting plan was presented in Los Angeles recently and only failed by a narrow margin on the ballot. This plan proposed to establish a regular 2-year apprenticeship training period for county employees. Some 500 to 600 selections would be made each year, under which college graduates and other qualified young people interested in the public service would be appointed to apprenticeship positions on a regular beginning salary. Careful ratings would be established, and, at the end of the apprenticeship period, regular civil service appointments would be made for those who proved their value during the training period. There appears to be a real future for plans of this nature. Yet older civil service workers are apprehensive with regard to the effect such plans will have upon their status.

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[1] STEVEN, JOHN, *Report of the Program,* at the Seventh Western Regional Conference of the Civil Service Assembly, February, 1937, p. 15.

Another variation of apprenticeship training is offered by special governmental bureaus such as the Federal Bureau of Investigation, cited above. This bureau offers training to the newly appointed special agents and provides opportunities for instruction so long as an employee remains in the service. The Training School for newly appointed agents, the Retraining School, the School for Special Agents in Charge, the Chief Clerk's Training School, the National Police Academy, and the various monthly training conferences for clerical employees, stenographers, etc., "are evidences of the vigorous pursuit of this policy" within the bureau.

The F.B.I. Training School for new appointees, first organized several years ago, provides basic training for all new special agents and lasts for a period of 14 weeks. Part of the work is composed of lectures by members of the bureau's training staff and by outstanding criminologists, police officials, and other law-enforcement agents. Another part of this work is that of "crime simulation." In describing the details of this part of the course, the bureau illustrates its nature as follows:[1]

> A group of Special Agents, with the necessary equipment, led by a veteran instructor, enters a room where a "crime" has just been committed. On the floor of the disordered room lies the lifeless form of "Oscar," the famed and oft-murdered wax dummy which is used in training Special Agents as to the methods used in investigating a murder. The instructor informs the Special Agents as to the nature of their task, and supervises the investigation of the fictitious crime in order that they may become more efficient investigators within the shortest possible time.

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[1] United States Department of Justice, Federal Bureau of Investigation, *Training Schools Selection of Personnel*, p. 4.

In another part of the Department of Justice Building, a group of Special Agents may be seen with the fingerprint equipment, dusting powder over the form of "Beulah," an old dilapidated automobile which is used by the Special Agents in learning the technique of latest fingerprint development, in studying methods of changing motor car numbers and in practicing such other investigations as are often required in this modern day when criminals are resorting to the use of high-powered automobiles in the commission of crime.

Other phases of this training lead the agents to "The Rogues Den" which represents from time to time a bank robbers' nest or a kidnapers' hangout. Everything is staged in the room in typical fashion, and the agent's task is to ascertain the identity of the former occupants of the den. Sometimes hypothetical cases are constructed, during which time the new agents are sent to interview citizens, who, in fact, are older members of the F.B.I. staff, and who report on the effectiveness of the agent's work. During one of these training periods, a group of agents appearing for class instruction one morning was surprised to find in a darkened room a small screen across the instructor's desk, in front of which stood a small unlighted desk lamp. Behind the desk were two men entirely hidden from view. Presently one of the men reached over the screen and turned the switch on the light, but the light would not go on. Then the other man went over to the wall switch, and pressed it on, but still the light would not go on. With this a man "planted" in the audience of special agents walked up to the desk, screwed the light bulb tightly into the socket, and the light went on. In doing this, however the screen on the desk was knocked over giving the men in the audience a good view of the two men behind the desk. The lights were then turned on, and the special agents were instructed to write down exactly all that had happened. The reports, naturally, were quite conflicting. Some reported that one man turned on the switches at both the desk and the wall. Others had the sequence reversed. After careful instruction and training, however, the men were taught accurate and close observation. Many similar methods are used in training special agents to create exact mental impressions and to stimulate visual and auditory facilities.

The F.B.I. serves as an excellent example of the possibilities and results of thorough scientific training. But, unfortunately for the quality of public service, it stands as the exception rather than the rule.

In-service training is perhaps one of the most serious deficiencies of public service. The sense of security and the automatic rating and promotion schedules that have been a traditional part of civil service have without doubt tended to "rust" the employee and deaden both his ambition and his interest. There are, however, noteworthy exceptions to this generalization. Progressive departments of public service have applied sound personnel policies in this regard. In addition to the thorough apprenticeship training given to new special agents as outlined above, the F.B.I. Retraining Schools afford up-to-date training in the latest law-enforcement methods and techniques. Every special agent of the bureau is expected to enter a retraining period lasting from 2 to 4 weeks at least once every 18 months.

The Federal Bureau of Investigation National Training Academy is operated for the benefit of employees in municipal, county, and state law-enforcement organizations without cost to the latter for the purpose of preparing these men for executive and instructor positions. The American Municipal Association listed some seventy-four training schools for municipal officials in 1932, attended that year by 7,670 public employees, in the hope that the training would "raise the standard of municipal service, lengthen the tenure of office, reduce personnel turnover, increase proficiency of officials and employees, and convince the public that municipal service is not just a political job but a technical and highly specialized work."[1] These schools offered courses designed for police, water works employees, financial administrators, dairy inspectors, fire instructors, civil service commissioners, building inspectors, assessors, welfare officials, sewerage-plant operators, purchasing officials, public works officials, and city and village clerks.

Early in 1937, the first annual training course for state factory inspectors was held, at which time the public inspectors from a number of states were assembled for a 10-day period of intensive and specialized training in the most recent problems and methods of factory inspection.[2] Daily lectures and conferences were held, followed by actual visits to numerous industrial plants in the city of Baltimore where close observation and inspection were made. This course was initiated by the Department of Labor and promises, along with many other smaller conferences of similar nature, to become an established training scheme. The Office of Education also has been doing commendable work in the field of federal employee training. Such a wide variety of schemes are currently used in public service training that individual plans cannot be taken up in detail.[1]

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[1] American Municipal Association, *Training Schools for Municipal Officials*, 1932, p. 3.

[2] "Training Course for State Factory Inspectors," *United States Department of Labor*, *Bulletin* 6, 1937.

Salaries and Promotion Policies.—Many public personnel bodies have had established, either by law or otherwise, standardized wage and salary rates and promotion policies. Countless variations in rates bear no relationship to reasonableness and fair play in personnel administration and, doubtless, give rise to much of the discontent and inefficiency that often characterize the field of civil service. The federal Classification Act has done much toward straightening out the confusion and inconsistencies which have been present in the federal service. Only recently, for instance, through the work of the United States Employment Service and several cooperative bodies, a nation-wide reclassification and job standardization program has been launched that promises to make needed progress in this field.

Most city, state, and federal employment bodies have established their own job specifications and salary ratings. A survey made by the American Municipal Association summarized the salary policies of several American cities.[2] The city of Baltimore maintains a uniform salary schedule for its employees, but uniform increases are not automatic. The municipal regulation, however, does provide that uniform maximum and minimum salaries be maintained for all city employees in the same classification. Every new employee is required to start at the minimum salary offered for his particular classification, and the right to promotion is guaranteed by means of passing a written examination before a new employee can be appointed. No employee is granted an increase in salary until at least one year's service has been rendered, and no more than one increase is permitted during any one year. The ordinance further provides that annual salary increases shall not be greater than one-fifth of the difference between maximum and minimum salaries as established in the schedules, and that no employee's classification shall be advanced unless there is a vacant position in the classification to which advancement is sought.

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[1] See, for instance, the classification given by the Public Administration Clearing House, *op. cit.*, p. 17.

[2] American Municipal Association, *Salary and Promotion Policies in United States Cities*, 1933, p. 2.

The San Francisco City and County charter standardized approximately 8,000 of the 13,000 possible positions upon a basis of duties performed, but in line with wages paid for the performance of similar duties throughout the city. The latter provision is often made in the establishment of wages for public service. In San Francisco, salaries paid the uniformed forces of the police and the fire departments are fixed by charter; those paid the public school teachers are fixed by the board of education; wages paid most other groups employed on public construction and miscellaneous jobs are established by the board or commission in charge. Recommendations of the local Civil Service Commission provide for annual and automatic seniority increases on a fixed scale from minimum to maximum rates, similar to the Baltimore allowances. During the depression years San Francisco, as was the case with most other municipalities, suspended automatic salary increases for teachers. The charter provides for an entrance salary of $180 per month for firemen, with normal increases of $10 per month during each of the first 2 years thereafter, thus providing a monthly income of $200 during the third year of service, and thereafter. This schedule is quite typical of most of the rating policies. Under the board of education of one of the nation's largest cities, 518 classifications are established with salary schedules fixed for each grading within each individual classification. The list provides for six general classifications for accountants with six salary grades under each classification as follows:

Salary Schedule on Flat Rate

Accountants	First	Second	Third	Fourth	Fifth	Sixth	Basis
Accountant	$191	$205	$219	$233	$247	$272	12 months
Chief accountant	210	233	257	279	303	333	12 months
Job accountant	191	205	219	233	247	272	12 months
Junior accountant	168	177	186	196	205	226	12 months
Stock accountant	210	233	257	279	303	333	12 months
Assistant stock accountant	168	177	186	196	205	226	12 months

No fewer than 65 classifications for clerks have been established on this list, and most of these carry several different salary ratings each.

Usually, salary scales extend over a period of 3 to 5 years. When an employee reaches the top of his classification scale, the only hope offered to him is for promotion into a higher classification which carries with it an increase in rank and salary. This must usually be gained either through a promotion examination or by means of reclassification, the latter to be granted after a public hearing. Sometimes, however, important exceptions are made in the salary schedule. In Milwaukee, for instance, some employees who have been with the public library many years and have failed to demonstrate capacity to advance to a higher classification or to assume greater responsibilities are allowed a special maximum salary overlapping that of the next higher grouping. This adjustment is not made uniformily but only by special action of the body in charge of ratings.

As has been previously noted, employees in public service are not highly paid, the average earnings for all being estimated at $1,448 during 1932.[1] Incomes of federal government employees during that year averaged $1,897; those of state and county workers, $1,373; city workers, $1,511, and public teachers, $1,400.[2] The trend of these governmental salaries has already been referred to in the opening pages of this chapter.

The scientific treatment of the problem of promotion of personnel in public service involves the recognition of several basic principles summarized by the Civil Service Assembly and the Bureau of Public Personnel Administration:

> 1. Where vacancies occur in positions above the lowest rank involving only simple duties, they should be filled by promotion of employees from lower ranks whenever these employees can qualify under appropriate standards rigidly maintained.
> 2. A determination of whether qualified employees are available, and selection of the best qualified, should be by means of competitive written examinations open to all employees in lower ranks who can demonstrate at least the required minimum of experience and training.
> 3. Where doubt prevails as to whether persons qualified for promotion can be found in the service, open competitive entrance tests may be held simultaneously with promotion tests, but with the announced understanding that the eligibles qualifying through the open competitive tests will not be appointed as long as there are eligibles qualifying through promotion tests..
> 4. Definite lines of promotion from lower to higher classes of positions should be adopted and published, but they should be interpreted as an outline of the natural or logical avenues of advancement and not as excluding employees in positions of other classes who can show qualifying experience.

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[1] Commission of Inquiry on Public Service Personnel, *op. cit.*, p. 9.

[2] EVERETT, FRANK O., "Promotion Principles and Practices," *Technical Bulletin* 2, 1929, pp. 1–2.

5. Any change from one position to another position carrying a higher immediate rate of compensation, or a higher maximum rate to which advancement is made possible by the change, should be considered a promotion instead of a transfer and the competitive promotion test procedure should apply.

6. In promotion tests the service should be treated as a whole, and the best qualified employee should be promoted without regard to the organization unit or geographical location in which he has been serving or in which the vacancy exists.

7. In recognition of special knowledge of routine, personnel, records, layout, and similar things, slight preference may be shown to each employee on a promotion employment list in determining the order of standing for appointment to vacancies in the particular branch of public service in which the employee is already serving.

8. The waiver of privilege, by which employees in line for promotion may ask to have their names passed over for particular vacancies, should be carefully guarded to prevent abuse.

9. Promotion tests should be of the same standard as original entrance tests, with an additional rating on length, kind, and quality of service in the lower ranks which tend to qualify for positions of the class to be filled.

10. A plan of rating systematically the actual performance of employees considered for promotion should be developed, and such ratings should be currently recorded.

11. The promotion plan, along with all other personnel policies, should be administered through a centralized personnel agency.

Discipline, Tenure, and Discharge.—No matter how carefully public servants are selected and trained both individuals and needs are bound to change. These changes often present problems of discipline and discharge. The tenure provisions of most civil service laws have created great obstacles to the proper treatment and solution of these personnel problems. In recent years, the arbitrary action taken by departmental heads and chiefs in the showing of political or personal favoritism and in other matters such as discrimination against public service employees who have organized for the purpose of collective bargaining has been "highly discreditable" to all civil service bodies under whose jurisdictions these acts have taken place. Especially is this true in view of the notable progress made during the past few years in the procedures followed, either voluntarily or under compulsion of law, by private industry. There can be no doubt that the public service is still loaded with "deadwood." In numerous cases, political partiality permeates the decisions of civil service boards. Discipline within the ranks of public service employees is not consistently applied.

As a result of these deficiencies, incentive is deadened and the general level of individual efficiency is low.

Procedure relating to the suspension, demotion, or discharge of employees is ordinarily established by law. Regulations usually provide that any sound cause is ground for suspension, and an unsatisfactory record of service is basis for demotion. Notice of such procedure is usually required, action being initiated by the personnel or civil service board or by the appointing officer. All such action, however, should be made subject to review and approval by the supervising board before becoming final. Grounds for discharge include incompetency, inefficiency, immorality, dishonesty, intemperance, insubordination, discourtesy, violations of provisions or rules, improper political activity, and lack of good behavior. Proceedings can usually be initiated by the supervising board, appointing authority, or private citizens. When suspension or discharge is proposed, notice is usually served, and employees are given opportunity to file answers and request a hearing. Sometimes in cases involving the latter course of action, a hearing can be requested by the supervising board, whose decision is final and therefore not subject to further review. Oftentimes, however, legal action can be initiated at this point.

Employment security through tenure should come only after it has been justified by means of actual service qualification and performance. "There should be no tenure apart from qualification for tenure."[1] The present tenure system in public employment has developed as a natural reaction to the wholesale discharge of civil servants by a newly elected political administration, regardless of individual merit, in the payment of political debts. In so far as it offers bona fide security for worthy workers against this type of action it is highly commendable and should be sustained and safeguarded. But in so far as it fosters indifference and inefficiency, and makes impossible or ineffective the enforcement of reasonable disciplinary regulations and procedures, it is a constant obstacle to the application of scientific principles in industrial relations. Evidence presented before the Commission of Inquiry on Public Service Personnel has shown that in recent years the tenure system has actually been used by political spoilsmen who have organized large groups of tenured employees to lobby for continued protection with no guarantee of standards which would justify this form of economic security.[2] In presenting the problem of tenure and discharge as one of the major problems of government personnel, this commission states:[1]

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[1] Commission of Inquiry on Public Service Personnel, *op. cit.*, p. 50.

[2] *Ibid.*

> Under certain of the public tenure laws, it is moreover virtually impossible to reduce or discharge any employee unless he has been convicted of some major crime. In many jurisdictions the Commission was told that the disciplinary procedure amounted to a trial of the department head rather than of the employee, so strict were the tenure safeguards. Countless examples were also cited of employees who had been reinstated with back pay only to resign immediately or to become serious problems for the department because they could no longer work peaceably in a department after removal and legal reinstatement. While the employee is entitled to protection against arbitrary or political discharge, this protection should not go so far as to interfere with the responsibility of the department head for efficiency. It may be pointed out that the establishment of a career administrative service will in itself lessen the need of such strict tenure protections as we have had, as it will bring to the top administrative places career men and not spoilsmen.

Matters of discipline and discharge involve the application of sound personnel policies, whether they relate to public or to private employees. The greatest need in the field of public service seems to be that of the establishment of grievance and discipline procedures, such as are found in current usage in practically all large private enterprises, and the practical recognition and acceptance of the principle that there should be no tenure unless there has been qualification for such tenure. To be sure, this entails far-reaching changes in laws and ordinances, but the principle is sound.

Retirement for Public Employees.—Public servants are little different from other workers; they grow old as time passes, and they must exist as long as life continues after their active service has ended. When people have devoted their lives to public service, they should be able to face old age in dignity and respectability. Their need for some source of income at this time is just as great as are the needs of the millions of employees engaged in private industry. It will be recalled that all federal, state, county, municipal, and local public employees are excluded from the unemployment compensation and old-age pension provisions of the Social Security Act. This exclusion was the result of the relative security of public employees under tenure clauses of civil service laws, and the numerous old-age retirement plans that were in force covering this group of workers at the time the Social Security program was enacted.

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[1] *Ibid.*, p. 51.

Many of these plans, moreover, are subject to all types of political maneuvering and tax-reduction programs. As a result, they have been subject to constant change or modification. Within the broad divisions of the federal, state, and local governments, however, retirement programs developed upon an actuarial basis have been in force for many years and have become a well-established governmental institution. The Federal Government Civil Service Commission, for instance, reported that for the fiscal year ending June 30, 1936, a total of 5,783 annuitants (5,057 men and 726 women) were placed on the civil service retirement and disability roll and were granted annuities as indicated in the following table.[1]

Rate per annum	$1 to 100	$100 to 200	$200 to 300	$300 to 400	$400 to 500	$500 to 600	$600 to 700	$700 to 800	$800 to 900	$900 to 1,000	$1,000 to 1,100	$1,100 to 1,200	$1,200	$1,201 to 1,300	$1,300 to 1,400	$1,400 to 1,500	Total
Number	1	36	124	170	261	452	681	446	261	302	386	1,220	1,367	71	3	2	5,783

The smallest annuity granted was $86.04; the largest was $1,479.24. On this date (June 30, 1936), 51,206 retired and disabled employees were on the federal pension roll, compared with 48,665 in 1935, 44,708 in 1934, and 32,835 in 1933. During 1936, approximately 3,242 annuitants were dropped, 3,107 of whom were dropped because of death, and 135 for other causes. The value of the annuity roll during the year was $50,427,467.

The laws covering most of the smaller groups of public employees vary considerably in detail. The law of one such body serves to indicate some of the more important provisions that are usually made. This act, entitled the "Retirement Act of 1937,"[2] was drafted to take the place of an older retirement law which was failing to remove superannuated employees or to provide an adequate annuity to those who had spent long productive periods in public service. This new act includes all county employees except those receiving retirement allowances from any other service (except for war service), those who were over 55 years of age before entering the county public service, and those on temporary or contract service or whose compensation from county funds is less than $80. The assets and liabilities of the old retirement system were absorbed by the new plan. An employee, upon leaving the county public service, is entitled to receive his accumulated and additional contributions (if he has made any) at compound interest. The supervisory board has authority to adopt rules and regulations covering numerous questions, including those of limitations of additional contributions and other matters of general policy not inconsistent with the provisions of the act. Personal contributions into the fund depend upon both the age and sex of the employee at the time of entering the system, with approximate amounts as follows, subject to actuarial adjustments in the light of experience:

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[1] United States Civil Service Commission, *Civil Service Retirement,* March, 1937, p. 1.

[2] Los Angeles County, Calif., *Employee Bulletin,* July, 1937.

Entry age, years	Employee contribution	
	Males, %	Females, %
20	2.68	2.88
30	3.09	3.47
40	3.75	4.29
50	4.63	5.30

To these employee contributions, the county adds an additional amount equal to 3.25 per cent of the county payroll.

Voluntary retirement may take place at the age of 60, but only if 20 or more years of service have been rendered. Compulsory retirement to take place 2 years subsequent to the effective date of the Act (January, 1938) is required on the first day of the month following that in which the employee attains the age of 70. Thus two years after the Retirement Act becomes effective every employee 70 years of age or over shall be retired. Where credit for prior service is allowed upon entering the retirement system, a minimum of $50 per month is provided upon retiring at age 70. A maximum annuity of $250 per month is established. When compensation is received from any public employment after retirement, the benefit is reduced by an amount sufficient to cause the total income to equal that received through straight annuities. In event of permanent physical disability, an eligible employee may be retired upon a disability pension which is less than what he would receive were he to retire at age 60, the amount being proportional to the number of years of service rendered. Other provisions of minor importance are made, and the act is administered by a board of retirement.

The protection of superannuated employees is a proper responsibility of government. This obligation must be met first of all within the ranks of public employees. A satisfactory pension system must be based upon sound actuarial principles, and should allow for transfers and promotions from one department or division of government to another without penalty. Most important, it must be administered fairly and effectively and should be an important part of the structure of public personnel administration. Doubtless it is only a question of time until all public service employees are included in a national retirement system for this group of workers.

Miscellaneous Public Personnel Policies.—If they are to be successful, public personnel policies must also recognize such problems as those relating to morale building, safety, working conditions, health and sanitation, sick leave, layoff, credit unions, outside work, marital status, and employee organization. The irresponsible and rutted public service employee necessitates a real morale-building program in civil service. This program can be carried on effectively with little change in personnel "by a concerted effort to eliminate maladjustments in placement, to provide training and opportunity for advancement, and to develop a constructive and cooperative relationship between employees and supervisors."[1] Safety work in private industry has demanded special attention; among government employees the possibilities of effective accident-prevention work are often slighted or overlooked completely by the application of short-sighted personnel policies. Yet opportunities for effective work are almost unlimited. As a result of a special study of safety and health, the San Diego City Civil Service Commission recently was able to effect a saving of more than $15,000 annually by means of reduced compensation rates and better accident prevention methods, not to mention the human suffering and misery that were prevented.[2] The working conditions, lighting, ventilation, fatigue, dust, noise, and confusion are of equal importance to workers in the thousands of occupational classifications whether they be engaged in public or private employment. But many times governmental bodies, through negligence, ignorance, or lack of appropriations, have thrown large numbers of employees into antiquated office buildings, or into other working environments where conditions are worse than they are even in the poorest of private enterprises. Only recently have civil service bodies awakened to the importance of these factors and the bearing they have upon fatigue, efficiency, contentment, and morale.

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[1] Reeves and David, *op. cit.*, p. 1.

[2] Civil Service Assembly, *op. cit.*, p. 18.

Sick Leave and Layoff.—Sickness and economic depressions are two factors over which individual employees in all walks of life have little if any control; nevertheless they are extremely important in determining the standard of living which each employee maintains. In matters of sick leave, those in public service are, as a rule, much better protected than are those in private industry. Many jurisdictions allow sickness cash benefits of one-half the normal salary for at least a minimum of 2 weeks, more often 30 to 60 days, for a service record of 6 months to 1 year. Divisions of government are accepting the plan of cumulative sick-leave periods which takes partial care of the employee with a long nonillness record if and when extended periods of illness overtake him. Some Bureaus of Public Administration recommend even more generous treatment than this. One, for instance, states that each employee with a 6-month service record should be allowed sick leave of a maximum of 90 working hours during the calendar year on pay, and that unused sick leave allowances be accumulated from year to year to a maximum of 500 hours "for employees who have been under civil service continuously for a period of not more than 10 years, and up to 1,000 hours for those who have been under civil service continuously for more than 10 years."[1] To the older public servant, this would mean the receipt of full pay for several months during a serious illness following a long service record seldom interrupted with absences.

Seniority rights often complicate the application of a wise layoff policy in public service. Great care should be exercised in maintaining an adequate skeleton staff so that work can be effectively initiated and supervised. The layoff of a single employee in a high salaried place is capable of disrupting the work in a large number of positions down the line, resulting in a greatly reduced operating efficiency for the staff as a whole. Likewise the layoff under seniority of lower ranked employees by means of a "bump-off" replacement all the way down the line can lead to great confusion and loss of effort. One public personnel officer has stated:

> It seems clear that good administration requires that the head of an office may say what work is to be eliminated when reductions are necessary, and whether or not employees laid off after such a determination shall have the right to bump permanent employees in lower classifications. If this discretion is left wholly with the appointing officer it may be easily abused, and employees may find themselves promoted out of the service.[2]

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[1] PFIFFNER, JOHN MCDONALD, *Public Administration*, p. 214.

[2] STEVEN, JOHN, *op. cit.*, p. 18.

Credit Unions.—In June, 1934, the Federal Credit Union Act was passed, providing for the establishment of cooperative associations organized for the purpose of promoting thrift among members and creating a fund of credit for "provident or productive purposes." By May, 1937, some 2,162 federal credit unions had been chartered, about 600 of which were established among groups of public employees.[1] At the end of 1936, 1,521 of these associations reported a total membership of 276,279 employees with total assets of $8,399,206. During that year, the 1,521 unions made 258,651 individual loans to their members amounting to $17,242,683, or an average of $67 per loan.

These credit associations are purely voluntary, and none of the governmental agencies contribute financially to their support. They had humble beginnings, most of them being started by the efforts of a group of public employees banding together for the purpose of raising funds for emergency situations and promoting thrift. Membership is usually voluntary. A small entrance fee (as low as 50 cents) and the purchase of at least one $5 share of stock are required. Membership does two things: for the thrifty worker seeking sound investment in small amounts it offers the opportunity to buy additional shares, thus contributing to the loan fund of the union; for the member in dire need it offers the possibility of securing a small personal loan without submitting to the exorbitant interest rates and fees exacted by the "loan sharks."

Public Service Employee Organizations.—Problems of employee-management representation and cooperation in public service are not identical with those in private industry, but they are not far different, for the basic principles of human relations are the same regardless of the type of service. As employment in the various branches of public service increases, the number of employee organizations tends to increase. Public servants, however, have been "notoriously oblivious" of their privileges and the advantages of organization for collective bargaining. Public service employee organizations in the main have taken the form of employee associations, there being but few civil service workers affiliated with national labor organizations. The typical association is represented by the California State Employees' Association, organized in February, 1931, with a membership of 4,362 in ten chapters. In 1937, this organization was composed of a membership of 12,656 registered in 49 chapters scattered throughout the state. The principal units of this organization, as provided in its new constitution, are the general council, board of directors, regional directors, and officers. The general purpose of the association is to promote cooperation among the employees of the state in effecting better conditions and promoting mutual interest. Three constitutional committees (civil service, law and legislation, and publicity) represent three important services to members. Dues are $1.50 per year, and special assessments are made from time to time as conditions demand. Membership creates eligibility to the employees' credit union, and offers many other mutual benefits, including organization for collective bargaining.

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[1] United States Senate Hearing, *Federal Employees Credit Unions*, May 11, 1937.

Only a few divisions of the federal service are without some kind of employee organization. Most forms existing at present are quite similar to typical local labor unions. Almost all these organizations, as well as labor groups in other divisions of the government, are pledged not to strike. Federal employee associations aggressively support legislation which they believe to be in their interest. Moreover, they negotiate with administrative bodies concerning labor policies, individual grievances, and complaints. Speaking of the activities of the federal organizations, the President's Committee on Administrative Management states in its 1937 report:[1]

> In the pursuit of these activities, the employee organizations frequently appear to encounter the passive, if not the active, opposition of administrative officials. It is often alleged that officials attempt to prevent organization, or attempt to dominate, control, or influence organizations when formed. Officials are said frequently to be reluctant to recognize and confer with representatives of employees' groups. Occasionally gross discrimination against active organization officials or employee representatives is alleged.

Unions in the Public Service.—Doubtless, this suppressive attitude has extended down through administrative officials in state, county, and local public services, and is partially responsible for the fact that few groups of government workers have become affiliated with regular labor unions. National labor unions in public service include the National Federation of Federal Employees, American Federation of Government Employees, International Association of Fire Fighters, American Federation of Teachers, the Association of Navy Yards Workers, and the several affiliated and independent groups within the postal service. Dual unionism among federal employees developed in August, 1932, when disagreement with the labor policies of the A. F. of L. in a matter involving government workers resulted in the withdrawal of the *National Federation of Federal Employees* from the federation. The N. F. of F. E. continued as a national independent union. This organization, established in 1917, aims to "advance the social and economic welfare and education of the employees of the United States and to aid in the perfection of systems that will make for greater efficiency in the various services of the United States."[1] Methods for attaining these objects are by petition to Congress, the gaining of public sentiment and approval, cooperation with government officials and employees, legislation, and other lawful means, except through strikes against the United States government.

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[1] United States Senate Hearing, *op. cit.*, p. 54.

The American Federation of Government Employees came into being at the time of the secession of the National Federation in 1932, and its charter members were largely those who did not wish to leave the A. F. of L. By 1935, after an ambitious campaign program, enough locals representing state, county, municipal, and federal government employees were gathered together to form a national union, thus introducing dualism into the unionization of public service workers. This federation strives to promote efficiency in the government service, and to advance plans for improvement by legislative enactment through cooperation with the government officials and by other legal methods, but it pledges not to strike against or otherwise embarrass the federal government. Neither of these two national federations makes any attempt to negotiate regarding wages, hours, or working conditions, inasmuch as these phases of industrial relations in public service are fixed by ordinance or law. Thus their most effective avenue of attack is through public support for favorable legislation.

The United States postal service employees are organized into fourteen different national unions, three of which are limited to carrier service, three to the railway mail service, two to postal clerical service, one to the operation and maintenance of post office trucks, one to watchman-messenger service, and the others to various postmaster associations. Most of these organizations seek to unite all the workers for their mutual benefit, to protect their rights, and to promote their welfare through the establishment of mutual benefit associations and otherwise. They have a relatively long history, some unions dating back 30 or 40 years. Rather keen rivalry is to be found between pairs of unions involving several of these groups of employees.

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[1] United States Department of Labor, "Handbook of American Trade-Unions," *Bulletin* 618, 1936, p. 301.

Trade unionism is, generally speaking, not an established institution among the ranks of public service employees. In fact, the principle of collective bargaining has found little recognition among groups of civil servants. There is no logical reason why collective bargaining should be denied to employees in public service, unless the recognition of this principle should lead to strikes and lockouts, which are taboo in the interest of public welfare.

Speaking of the unique relationship existing between government employees and their employers, President Roosevelt said recently:[1]

> The desire of government employees for fair and adequate pay, reasonable hours of work, safe and suitable working conditions, development of opportunities for advancement, facilities for fair and impartial consideration and review of grievance, and other objectives of a proper employee relations policy is basically no different from that of employees in private industry. Organization on their part to present their views on such matters is both natural and logical, but meticulous attention should be paid to the special relationships and obligations of public servants to the public itself and to the government. All government employees should realize that the process of collective bargaining, as usually understood, cannot be transplanted into the public service. It has its distinct and insurmountable limitations when applied to public personnel management. The very nature and purpose of government make it impossible for administrative officials to represent fully or to bind the employer in neutral discussions with government employee organizations. The employer is the whole people, who speak by means of laws enacted by their Representatives in Congress. Accordingly, administrative officials and employees alike are governed and guided, in many instances restricted, by laws which establish policies, procedures or rules in personnel matters.

No doubt this thought has been a strong factor in suppressing the development of collective bargaining machinery within the field of civil service. But there have been other important factors, chief of which are the deterring influences of traditional practice and bureaucratic political discipline that have prevailed in all types of governmental work. Various governmental jurisdictions have a real task before them in regard to policies of employment relations. This involves the abandonment of unscientific policies which through the years have become deeply rooted, and the inauguration of progressive personnel policies similar to the best in private industry. In the words of the Commission of Inquiry on Public Service Personnel, "The time has come in the history of America to adopt an entirely new public policy in the selection and appointment of men and women to carry on the day-to-day work of government."[1]

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[1] In an open letter to the National Federation of Federal Employees upon their twentieth anniversary of the founding of the union, Sept. 5, 1937 (*Los Angeles Times*, Sept. 6, 1937).

Three steps, at least, are involved in the inauguration of this constructive program.[2] The first calls for the issuance of a new statement of policy relative to the right of public servants to designate representatives of their own choosing in matters of collective bargaining. If employees in private industry, through their representatives, have the right to joint conference with management, why should this right be denied government employees? Likewise, their protection against intimidation and discrimination should be assured. Administrative officials of governmental bodies should be required to deal cooperatively with their employees in regard to matters concerning working conditions. Individual employees, as well as their properly chosen representatives, should be given fair opportunity to present their grievances and complaints to their superiors.

The second step involves the creation of proper machinery for the purpose of making these newly announced policies effective. Finally, there is needed some "impartial adjusting agency," a federal or public service personnel relations committee, whose chief duty it would be to investigate grievances arising in the public service throughout the nation. In this program, the peculiar obligations of public servants to the public, requiring orderly, continuous, and efficient conduct of governmental activities, demand that there shall be no resort to militant tactics in collective bargaining. Strikes and lockouts should be prohibited.

Recommendations for Improvement of Public Service.—In suggesting improvements in governmental personnel administration, it would be unwise in the short space at our disposal to attempt to go beyond the recommendations of two important committees of inquiry. These two committees (the Commission of Inquiry on Public Service Personnel, 1935, and the President's Committee on Administrative Management, 1937) have made exhaustive investigations of governmental personnel problems and have suggested a constructive program which, if adopted, would result in greater efficiency and economy and would greatly improve personnel relations in government service. Briefly, this program[1] suggests that:

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[1] Report of the Commission of Inquiry on Public Service Personnel, *op. cit.*, p. 13.

[2] See the Report of the President's Committee on Administrative Management, *op. cit.*, p. 54.

1. The present *merit system* should be extended into a *career service system* in various governmental units through the enactment of laws or the development of existing personnel or civil service administration.
2. Each of the larger governmental units should develop an agency for personnel administration in order to render constructive personnel service, instead of devoting complete attention to the policy of appointments.
3. All positions involving compensation from public monies should be classified as:
    a. Political or major policy determining.
    b. Judges.
    c. Military service.
    d. General service.
4. The general service should be placed on a career basis, with definite promotion steps announced.
5. Career service should extend to all nonpolitical top positions.
6. The major classification of the general public service should be:
    a. Administrative service.
    b. Professional and technical service.
    c. Clerical service.
    d. Skilled and trade service.
    e. Unskilled service.
7. With career service established by means of competitive entrance, and advancement on merit, salaries of the top positions should be advanced, and adequate retirement provisions should be made for each group.
8. Recruitment from American educational institutions into the career service should be encouraged.
9. Certification from proper bodies should be made a prerequisite for appointments to all professional and technical positions.
10. The probation principle must be developed and utilized.
11. Evasion of the merit system through temporary appointments must be prevented.
12. Systems of promotion must be developed and maintained.
13. Public employees must be secured against arbitrary and unfair dismissal or demotion.
14. A financially sound pension system for worthy servants should be established, allowing for transfer of credits.
15. Cooperation between federal, state, and local personnel administrative bodies should be encouraged among the various agencies.
16. Public personnel research should be promoted and coordinated, possibly through a proposed civil service or council of personnel administration.

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[1] Also see the constructive program presented by Lewis Meriam in *Personnel Administration in the Federal Government,* 1937, The Brookings Institution, pp. 59–62.

17. For the federal government, a central personnel agency should be established under a well-qualified, nonpolitical administrator carefully selected through civil service examination.

18. A new federal civil service board of citizens should be established to assist the President in the protection, improvement, and extension of the *merit system.*

19. The importance of personnel administration at the departmental level of administration should be recognized by increasing the number, improving the quality, and adding to the responsibilities of existing departmental personnel offices.

20. Personnel administration for emergency agencies should be organized on a more flexible basis than is necessary or desirable in permanent establishments.

21. Attention should be devoted to the development of organization and procedure to bring about improved personnel relations throughout the public service.

There can be no doubt that the application of these recommendations would do much to solve the personnel problems peculiar to public employment and would inaugurate a new era in employment relations within the field of civil service in the United States.

PART VI

JOINT RELATIONS AND COLLECTIVE BARGAINING

CHAPTER XXXII

ORIGIN AND NATURE OF EMPLOYEE REPRESENTATION

The Concept of Democracy in Industry.—The traditional theory of management under capitalism is founded upon the major premise that the employer should exercise complete control over both technical and human factors. Under this theory, employees are not to share in the management of industry and business. This conception has been generously nourished by the spirit of individualism which has dominated capitalistic civilization ever since its inception in the early years of the eighteenth century. It is still currently accepted in every country where the absolute prerogative of the employer to dictate the terms of the labor contract is identified with the right of private property. The employer's rights in this regard are to be safeguarded from interference on the part of the state functioning through law, as well as from the workers expressing their needs and desires through labor organizations. There are still those, especially in the United States, who insist that the absolute and arbitrary control of industrial relations by the employer is nothing more than the legitimate exercise of a "natural right," comparable to the historic "divine right" of kings.

Unfortunately for the exponents of monarchical absolutism, the advancement of political democracy since the closing years of the eighteenth century has sounded the death knell of so-called "divine rights." For the students of industrial relations, the historical significance of this revolutionary change in the concept of political organization and control is that men and women who have been made politically free are unlikely to remain industrially unfree. Indeed, contemporaneously with the movement for political emancipation there has developed an equally general movement for industrial freedom. The desire to acquire a democratic status in the workshop and effective representation in the councils of industry is now almost universal. There are many who believe that complete democratization of industry is inevitable. Certainly the intermittent reappearance of political and industrial autocracies and dictatorships has failed to stem the progress of democratic control. Everywhere, mankind almost instinctively turns to freedom.

There can be no permanent blockade of true liberty. The increasing universality of education, the spread of critical thought, the passing of belief in supernatural sources of special rights and privileges, the abandonment of superstitions that built halos about the heads of ruling classes, the mobility of ideas, and the development of the right of organization, all conspire to preclude the permanent suppression of true freedom.

Diametrically opposed to the autocratic conception of industrial relations, which invests the employer with undisputed authority over industry, is the democratic conception which postulates the idea that workers are entitled to a voice in industrial administration. If democracy means what it is generally regarded as meaning, namely, that "everything which concerns all should be decided by all" and that "the will of the majority legally expressed shall be the law," the application of this doctrine to industrial relations may have far-reaching effects upon the rights and privileges of both employers and wage earners. The ultimate limits to which the movement for democratic organization and control of industry may go and the results that may issue therefrom are difficult to presage. Conservatively minded people doubtless feel somewhat queasy about the whole matter. Such persons can find abundant consolation in the fact that as yet the forces of real democracy have made comparatively little headway in industry. The immediate future, while it promises a modification of the *status quo* in employment relations, does not promise a thorough process of democratization. But some progress is being made. A new conception of employment relations is gradually finding its way into the philosophy of industrial organization.

This new conception dispenses summarily with the old master and servant relation, which has been so largely responsible for the revolt of the working class, accentuation of the class-struggle doctrine, and consciously practiced inefficiency. It posits a new hypothesis which presumes that government by representation and consent is more to be desired and will yield more lasting benefits to all concerned than government according to arbitrary rules and regulations imposed by a master class. Employee representation is seen as a better basis for civilization than industrial subservience. The dissemination of this philosophy of industrial relations has been partly responsible for widespread experimentation with plans for employee representation, variously known here and abroad as "shop committees," "workers' representation," "works councils," and "industrial government."

Employers hope to find in these divers plans a *modus vivendi* which will eliminate many of the causes of waste and inefficiency, thus leading to industrial peace and fulfilling their ideal of democratic control within the confines of their own enterprises. The workers seek in such experiments a measure of industrial freedom, an established channel of communication between themselves and management, a mechanism for the consideration and adjustment of complaints and grievances, and an opportunity for a voice in the government of labor relations. The public, through its governments, apparently confers official blessing upon these ventures in constitutional government in industry and sees in them a movement for harmony between employers and wage earners, a groping after a substitute for industrial disorder. The substitution of peace and cooperation for continual conflict and strife appeals to the rationally minded everywhere.

Why Employee Representation Is Necessary.—Viewed broadly, some form of joint control of industry not only is necessary and expedient, but is also a just responsibility. It meets the requirements of a workable rapprochement between employers and their employees and accords with the finest principles of human relations in a democratic community. From a rigidly practical point of view, workers' representation is necessary as a means of communicating to management the grievances of the workers and, conversely, of communicating to the workers the wishes and aims of management. Modern organization, distressingly lacking in the intimate personal relation of simpler stages of economic development, urgently needs some form of joint control which will bring management and men closer together. The statement of a manager of industrial relations summarized a general situation:

> Our management has always prided itself on its liberal attitude toward the employees. While the organization was smaller, that policy of fair dealing seemed to be all that was necessary. Yet as the organization grew, it appeared increasingly difficult to maintain uniformly satisfactory contact between men and management.[1]

Some channel of communication is expedient if misunderstanding is to be avoided, the highest efficiency assured, and the greatest possible measure of economic justice in the workshop is to prevail. It is often thought that the provision of good wages, reasonable hours, and safe, sanitary and comfortable conditions of employment will bring peace and contentment to the workers. Disillusionment often follows such hope. Even where these basic requirements of industrial peace have been met, unrest has reappeared. Employee participation in the formulation and execution of those rules and regulations that govern their everyday employment conditions is essential to harmonious relations.

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[1] GATES, A. B., "Employee Representation Technique," *American Management Association, Production Executives Series*, no. 49, p. 26.

Transcending both of these reasons for joint control, in the minds of many labor leaders at least, is the inauguration of constitutional government in industry as a fundamental right of those who toil. The workers' claim to representation in the councils of industry is based not on the superstition of "divine right" nor on the naïve abstraction of "natural right," but rather on the sheer fact that they are an indispensable factor in the production of wealth and are directly affected by the regulations, policies, and conditions of the office or workshop. If this were not reason enough, the very fact that they are men and women in a free political democracy might legitimately be advanced as a basis for employee participation in management.

In the last analysis, perhaps, employee representation in the councils of industry is nothing more nor less than an equitable fulfillment of a moral responsibility. Our civilization has not been developed by any one man or any special group of men. Rather is it the joint product of all those who ever worked with hand or brain in the construction of our industrial and cultural organization. It is essentially a cooperative task. The legitimate purposes of our civilization, therefore, cannot be interpreted as designed to serve the special interests of any privileged class, whether of employers or employees, but rather to procure for all members of the community the greatest measure of self-expression, opportunity, and happiness. If this is true, then there is no adequate reason for excluding from the administration of personnel relations the men and women who are so largely responsible for the continuity of our economic civilization. Industry, after all, is not an end in itself but a means to an end. That end is to assure to the community the maximum amount of commodities and services at the lowest possible cost. Fundamentally, the purposes of industrial organization are social. Granting this, all members of any industrial community are entitled to a voice in its management. The same canons of democracy that urge a share for employees in the government of the workshop also insist that, if the workers are to be given a voice, they must accept responsibility for making industry economical and efficient and for sustaining an active interest in its government.

Meaning of Joint Control in Industrial Relations.—It is almost impossible to unravel the multiplicity of conceptions of the term "employee representation." Even employers and employees differ in their notions of what joint control should be. To certain employers, it involves nothing more than the extension of employer-employee control over the general conditions of employment, such as wages, hours, and physical conditions; it does not include control of shop discipline, discharge, and other matters of no less vital importance in the economic life of the worker. To a very limited number of employers, who may be regarded as far in advance of their generation, joint control includes all these matters and more, even representation of employees on boards of directors. Between these two extremes, there are varying shades of opinion as to the true meaning of employee representation.

Nor does one find unanimity of opinion among the workers themselves, from whom the demand for industrial self-determination originally sprang. Wage earners and those who sponsor their cause talk glibly of "industrial democracy," without apparently agreeing on the implications of the phrase. It is evident to anyone who has first-hand knowledge of the situation that many workers do not desire any control of the workshop so long as the employer manifests a tendency to provide them with a decent wage scale, reasonable hours of work, fairly safe and comfortable conditions of employment, and a goodly measure of security in the job. Even when given a voice in management, many workers display a disappointing indifference to the responsibilities imposed upon them by such action, and show a conspicuous lack of interest in the plan of representation. In this, they reflect the same lethargy which characterizes the attitude of so many of their fellow citizens in regard to the responsibilities of political suffrage.

It is probably true, nevertheless, that most wage earners desire a voice in the control of wages, hours, and physical conditions of employment; a goodly number would also include such matters as shop rules, discipline, and discharge. Still others seek a voice in the control of technique and would assist in determining changes in the methods of production, mechanical organization, and standards of performance. Not a few of the most progressive unionists desire nationalization, which involves the purchase of major industries by the government and the provision of joint management by technical executives and representatives of the workers. The most extreme conception of democratic industry is, of course, that advanced by socialists, communists, and syndicalists, who insist that industry should be completely reorganized on a collectivist basis with both ownership and management vested in the workers, thus eliminating private ownership and control by the capitalist class.

Employee representation, then, is a broad term used variously to designate numerous forms of employee-employer dealing, including the company union, industrial association, joint conference, industrial representation, joint conference committee, works council, cooperative association, shop committee, and industrial council.[1] What joint control actually is, as practiced in contemporary industry, will become apparent when we examine the development, structure, and functions of plans for employee representation.

Background of the Whitley Council Scheme of Great Britain.—Industrial relations in Great Britain have developed so differently in many significant respects from the lines of development in the United States that a brief comparison of structure and policies may prove enlightening. The field of modern personnel management in England is largely centered in a scheme of individual employer-employee relations which was developed out of recommendations made by the Whitley Committee whose duty in the postwar period was to secure "permanent improvement in the relations between employers and workmen."[2]

There were several reasons why such a plan was needed. Business had increased to the point where small private employers no longer were in constant touch with their working force. Trade unions had grown into powerful political bodies, and employers had organized national associations. Thus collective bargaining had become general. This had necessitated the development of machinery to handle industrial disputes. In order to preserve law and to attempt to prevent strikes and lockouts, the British government intervened in disputes. Furthermore, the war had speeded up productive organization phenomenally. Trade unions doubled their membership and began to merge in an effort to cooperate in their program. Control boards had been established by the government, wages tended toward a uniform basis, and compulsory arbitration of industrial disputes had been adopted as a war measure.

Out of the wartime confusion, the "shop-stewards" movement began, under which men were to see that union standards of employment established in their respective work places were maintained.

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[1] United States Bureau of Labor Statistics, "Types of Employer-Employee Dealing," Serial No. R317, 1937.

[2] SEYMOUR, JOHN B., *The Whitley Councils Scheme*, 1932.

But at first, these shop stewards had no power to adjust grievances, and they were not recognized by the managements. The employee-representation movement actually began in 1915 when the shop stewards of the Clyde engineers' strike took charge of the dispute and announced that they alone represented the strikers, and that all negotiations were to be carried on through them. Other stewards soon followed the Clyde example, negotiating rates and hours, dealing directly with grievances, and calling individual strikes. "Work shop control" was their new slogan.

Reports of the Whitley Committee.—It was in this environment that the Whitley Committee was created in 1916. After an intensive study of industrial and employment conditions, the committee began to issue reports and recommendations. In its first report (issued Mar. 8, 1917), the committee recognized the value of arbitration and conciliation schemes and accepted trade unionism and employee representation. Further, it proposed three things: *a national joint industrial council* composed of representatives of labor and management to consider general matters; *district councils* to deal with district industrial relations; and *works committees* in individual companies to deal directly with the shop relationships between employer and employee. The first report was on basic industries; the reports which followed over the next 3 years dealt with less and less important ones. The exact organization of these works committees was left to the individual firms, but the committee did urge that regular works council meetings be held at least once every 2 weeks, at which time all kinds of suggestions for improvement were to be discussed. The fourth report recommended that there should be organized a standing arbitration council but that arbitration should not be compulsory. As a result of this recommendation, the Industrial Courts Act of 1919 established Great Britain's first permanent industrial arbitration court. The final report summed up the recommendations of the other reports.

The establishment of these joint industrial councils was not to be compulsory. Instead, several steps were to be followed:

1. General pressure to get both sides together within a given industry.
2. Calling a conference attended also by a member of the Labor Ministry.
3. Using persuasion in getting the conference to adopt the Whitley plan.
4. Planning a meeting at which a constitution could be agreed upon.
5. Actual formation of the National Joint Council.

Many of the biggest British industries—coal, engineering, railroads, shipbuilding, cotton, and agriculture—refused to accept the Whitley plan. Nevertheless, during the early years of the scheme some thirty-one national councils covering 2,500,000 workers were formed. On July 4, 1918, the British government announced the application of the Whitley program to its own employees through the Civil Service National Whitley Council. By 1932, approximately 3,800,000 workers were operating under the scheme, of whom 3,000,000 were in the joint industrial councils, 150,000 in interim reconstruction committees, and 650,000 in the railway joint bodies.

The Plan at Work.—The Whitley council plan encourages each trade to draw up its own machinery for employer-employee relations, and thus offers considerable flexibility. Certain limitations, however, apply to all. One is that council membership must be made up of representatives of the organized societies in the industry. Another is that there must be both employer and employee representatives as members of a council. A third is that council voting is by sides, and in order to a carry a motion both sides—employers and employees—must show a majority in favor of the resolution before it is adopted. Finally, the costs of the council work are borne by industry.

Councils usually have written constitutions, covering such items as membership, officers, committees, meetings, voting, and finances. Their size depends upon the nature of the industry and the number of enterprises involved. The largest council is that of the National Maritime Board, with 120 members; among the smallest is the Government Co-ordination Committee Trade Council, with 8 members. Meetings are usually held at frequent and regular intervals. Upon request of any council, the Ministry of Labor sends a liaison officer who is a civil servant and who attends the meeting in an advisory capacity. The government also often provides a meeting place for the councils. Subjects discussed at these meetings include all problems of industrial relations from an individual wage or discharge complaint to the most complicated industrial policies, such as the stabilization of employment. Some of the more important responsibilities of the councils are:

1. Promotion of joint relations between employer and work people.
2. Consideration of wages, hours, and working conditions for industry as a whole.
3. Planning of measures for production and employment stabilization.
4. Devising of machinery to facilitate speedy settlement of industrial disputes.
5. Consideration of ways of expanding the scheme to include all employers and employees.
6. Research work within the member industries.

7. Provision for maximum use of technological improvements.
8. Improvement of health and accident conditions, and provision for special treatment where desirable.
9. Promotion of cooperative effort between industries and the government.

Much of the work pertaining to the intimate relations between employer and employee is done by *special committees.* The Printing and Allied Trades Joint Industrial Council, for instance, has committees for general purposes, health, apprenticeship, unemployment, conciliation, organization, betterment, and financing. The work of these special committees is illustrated by the Apprenticeship Committee of the Printing Council which has developed a comprehensive apprenticeship scheme including educational and training activities, and has worked out special techniques in the selection of apprentices and standardization of training methods. The Match Manufacturing Industry Joint Industrial Councils have effected minimum rates and wages, maximum working week, a week's vacation period, holiday pay, and supplementary workmen's and unemployment compensation insurance.

The chief objective of the Whitley council system is the settlement of industrial disputes. Nearly every council has its conciliation committee, and many have established arbitration panels. In the council representing the tramway industry, any complaints concerning wages or working conditions are immediately referred to the wages committee. If a settlement is not reached quickly, the dispute is placed before an arbitration tribunal of fourteen persons, five chosen from each side of the council from among their members, and two others by each side from outside their memberships, one of whom acts as chairman.[1]

The Printing and Allied Trades Joint Industrial Council stated in its 1928 report:

> The Conciliation Committee has sat on four occasions. In every case it has reached a finding which has led to a practical solution (although in one case only with the help of the full council). Nothing is more encouraging or more satisfactory than this work of the Conciliation Committee, which has been called the keystone of the whole structure.

Influence of Whitley Council Program upon Personnel Policies of Individual Organizations.—It must be remembered that this program has not been compulsory, and it varies markedly among different industries and in different enterprises. Some sixty-four councils were active in 1932; of these, thirty-five represented entire industries. In addition to these national councils, there are in order of their importance: *district councils* (which sometimes become "national"); *departmental councils* of the civil service; *sectional councils* of the quarrying industry; *governmental, departmental, and trade committees; district boards* of the National Maritime Board; the *port committees* of the Dock Labour Joint Industrial Council; the *usual district councils* of the industries; and other local works committees for towns or areas.

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[1] SEYMOUR, *op. cit.*, p. 60.

National joint industrial councils usually are responsible for general policies and practices within their respective industries, but the district and local councils are the bodies which come into direct contact with individual organizations. The *works committee* is a body that definitely helps in shaping the personal relations between an individual employer and his workers in England. Usually, these committees are jointly organized, representing both the management and laborers; they link the individual establishments with the district and national councils. These bodies are concerned with questions of the local life and comfort of employees; but they leave the major problems of wages and hours for settlement by national agreement. The committees also deal with local problems of discipline and factory or office routine. The specific jurisdiction of the works committee covers the following:

1. Questions (other than wages) referred to it by management or employees.
2. The settlement of grievances.
3. Questions relating to the health, safety, and welfare of workers.
4. Working rules and questions of discipline and conduct.
5. Local educational matters and employee training.
6. Suggestions as to working conditions, efficiency, and improvement of processes.
7. Local methods of wage payments, employment and holiday pay, and vacations.
8. Charities, relief, and social life.

Weaknesses of the British Scheme.—This program is a noteworthy attempt to establish better industrial relations within member organizations, even though it has not attained as prominent a place in British industry as was hoped by its exponents. There are major weaknesses which are largely responsible for this failure. If any employer-employee plan is to be effective, there must be an honest desire on the part of both sides for the establishment of a workable plan. Such desire for the Whitley council has not been sufficiently general to warrant great success. In fact, there is a lack of interest in the work of these committees. Furthermore, there is among both employers and trade unionists a spirit of opposition to the adoption of the Whitley council scheme. Employers seem to fear that the works committee will bring trouble because of the wider discussion of company grievances which it encourages. Trade unionists are apprehensive of the antiunion attitude which the movement has produced. One union leader has expressed this fear thus:

> Why give the firebrands a chance? The union works all right as things are; it has its representatives at the works now, who can handle all questions without interference by outsiders. A works committee wouldn't bring peace; it would only stir up trouble for the Union. The shop stewards movement taught us that.[1]

An employer states:

> Yes, it might have good results at some works; but at mine things are running smoothly as they are. About the only thing a works committee would discuss would be fancied grievances; and these would be manufactured, just to give the meeting subjects to talk about. However, I am not opposed to works committees, provided they are under careful guidance and control.[2]

There are other objections to the principle. Employers are usually reluctant to abandon traditional practice and accept new methods of administering industrial relations; they feel that such a plan interferes with their own management rights, reveals secrets of the organization, wastes much time. Unionists seem to feel that the work of committees lessens the centralized power of union organization; weakens collective bargaining and union loyalty; gives the management an opportunity to control the meetings.

Despite these and other weaknesses, this form of representation has offered some encouraging results. It has aided in the application of the principles of scientific management and in the organization of industry in general. The scheme has extended collective bargaining and has thus led to many improvements in working conditions and wages. Through it, trade unionism has been better established, and the cause of industrial peace has been promoted through conciliation and arbitration. Cooperation between works councils and other bodies, such as the government and other industries, has been encouraged. Education in industrial health, apprenticeship training, safety, and general welfare have been advanced. Thus, while it has failed to develop as extensively as some might wish, the movement has nevertheless achieved notable results, and should serve as a valuable experiment. American employers and workers might well learn much from the Whitley plan for the administration of personnel activities upon a coöperative basis.

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[1] *Ibid.*, p. 86.

[2] *Ibid.*

Development of Employee Representation in the United States. The movement for workers' representation is almost as old as modern industry itself. Its beginnings in America coincide with the emergence of trade unionism, which, as in England, is largely a product of the phenomenal development of industry subsequent to the industrial revolution. Wage earners in America were not to be denied some form of effective representation in the determination of standards of employment which concerned them so vitally. With the organization of the American Federation of Labor in 1886, considerable integration of the various union movements was accomplished and the future expansion of unionism was practically assured. The more or less vague political, economic, and social idealism of its predecessor, the Knights of Labor, which was organized in 1869, was deemed inadequate for the practical exigencies of the time. The American Federation of Labor substituted the more practical idealism of craft-union autonomy, indirect rather than direct political activity, and a predominantly business unionism negotiating trade agreements with employers to govern wage scales, hours, and conditions of employment. The A. F. of L. dominated the labor movement in America for over half a century, and its constituent unions made collective bargaining the established order in many industries. Outside the A. F. of L., such organizations as the Railroad Brotherhoods, the Amalgamated Clothing Workers of America, and, more recently, the Committee for Industrial Organization, have made trade agreements the basis of constitutional government in employment relations.

Simultaneously with the expansion of the American labor movement subsequent to 1886, there has developed a movement for works councils, shop committees, and shop governments independent of labor unions. In fact, the vast majority of American shop committees have been in no way identified or affiliated with traditional trade unions, a situation often contrasted with that in the United Kingdom, where the works committees are formed by and function for organized labor. In the United States, employee-representation plans have often been largely the product of the desire to preclude unions from becoming the established medium of collective bargaining. Consequently, employers have insisted that the unit of collective bargaining shall be the single establishment rather than the trade or industry; that all negotiations concern the individual establishment rather than the trade or industry; and, that all negotiations concerning standards of employment shall be direct with their own employees. It is not strange, therefore, that the majority of joint-representation plans in this country have been introduced in establishments and enterprises operating on the so-called "open-shop" basis, which in reality has been a nonunion, if not an anti-union, basis.

The first suggestion for a works council in this country seems to have been made by James C. Bayles, in an article, "The Shop Council," written in 1886.[1] His plan provided for a works council consisting of five members, two to be elected by the wage earners and two by the management, these four to choose a chairman who need not necessarily be connected with the establishment. This plan seems never to have been put into operation. In 1904, the Nernst Lamp Company, of Pittsburgh, Pa., introduced what was evidently the first experiment in joint control. The plan provided for a "factory committee" comprising representatives from the clerical force, factory operatives, and foremen, with the superintendent of the plant as permanent chairman. With a change in management, this plan was discontinued. In 1907, the Nelson Valve Company, of Philadelphia, introduced a plan of representation which consisted of a "lower house" and an "upper house," the former composed of one representative from each shop and the latter comprising foremen. The abandonment of this plan was also attributed to a change in management.

Experiments continued to be made in various trades and industries, sometimes in joint agreement with trade unions and sometimes completely independent of any form of unionism other than what is known as "company unionism." Prominent among the later ventures were those of Hart, Schaffner and Marx, clothing manufacturers, of Chicago, whose trade board was introduced in 1911; the Packard Piano Company, of Fort Wayne, Ind., which in 1913 inaugurated a plan of representation patterned in part after the United States government; the Colorado Fuel and Iron Company, whose employee-representation plan was put into effect in 1915; the "industrial democracy" plans of William Demuth and Company, of New York, introduced in 1917, and the Columbia Conserve Company, of Indianapolis, started in 1919.

The period of the World War witnessed an unprecedented growth of workers' representation plans in the United States, as in England

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[1] Published by the Society for Political Education, New York City, 1886.

and other warring countries. The reasons for growth of these plans are not difficult to find. The labor market was favorable to the wage earner because of the acute shortage of workers. Extraordinary inflation of prices brought rapid increases in the cost of living, and, as is usually the case, wages did not keep pace with prices. Because of the scarcity of labor, employers were bidding frantically for each other's workers, and this caused an enormous increase in labor turnover. Under such conditions, employees became restless and made urgent demands for increases in pay and more favorable conditions of employment. In order to get the largest possible share of the abnormal profits incident to wartime business conditions, employers naturally seized every opportunity and expedient to maintain their working forces intact and to assure industrial peace. Employee-representation plans already in operation were proving a successful means of adjusting grievances. Workers' representation in management was being urgently recommended by such governmental agencies as the Shipbuilding Labor Adjustment Board, the President's Mediation Commission, the United States Fuel Administration, the United States Railroad Administration, and the National War Labor Board, all of which inaugurated joint management plans in the industries under their jurisdiction.[1] A great many industrial and business concerns voluntarily introduced works councils or shop committees to meet the exigencies of the time.

Many of the employee-representation plans inaugurated before and during the World War have been abandoned; many others have continued to operate successfully. The postwar period has witnessed a considerable development in joint management. The constitutionality of the National Labor Relations Act probably means that in the future there will be increasing representation of employees in deliberations concerning employment relations. The government has accepted the practice of collective bargaining as necessary and equitable, and increasing numbers of employers are recognizing the necessity of such a principle. It is no longer so much a question of the desirability of collective bargaining as it is of the most acceptable agencies of making such bargaining effective.

Principles of Collective Bargaining.—Collective bargaining may be defined as a process of negotiation between two or more parties or groups of persons acting in concert. This process may involve negotiations between a single employer and a group of employees as in the case of a company union or employees' association; an association of employers with a number of groups of employees, as when a national labor union is negotiating with a whole industry; or some varying combination of these two general methods.

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[1] WATKINS, G. S., "Labor Problems and Labor Administration in the United States during the World War," *University of Illinois Studies in the Social Sciences*, vol. 8, nos. 3 and 4, 1920.

Certain economic principles underlie the process of collective bargaining. Basic to all forms is the proposition that both sides must be fairly well balanced in interest and strength in order to make the bargaining effective. Furthermore, there is a fundamental difference between the results of collective bargaining and those of individual bargaining. In the former case, the collective process results in a working (or trade) agreement; in the latter, the result is an individual labor contract. Finally, is the thought that collective bargaining is a means to an end. Effective collective bargaining serves as an agency of industrial order. From labor's viewpoint, it serves two general purposes: one, the gaining of immediate material benefits in the form of higher wages, shorter hours, and better working conditions; the other, union recognition and the right to organize.

Types of Employee Representation.—Generally speaking, there are three broad classifications of employee representation. First, is individual representation, under which the individual represents himself and himself only in all matters of employment relations. All problems of industrial relations are adjusted individually between the supervisor or personnel director and the employee. Even in other types of representation, individual dealing usually exists, especially in cases coming under the control of the National Labor Relations Act.

Second is the so-called "company-union" type of representation, a plan under which the employees of a given organization form their own representative agency for the handling of all problems that arise in employer-employee relationships. This type of collective bargaining was encouraged by the famous Section 7A of the National Industrial Recovery Act. That section gave employees the legal right to self-organization, to bargain collectively through representatives of their own choosing, and to engage in concerted activities for the purpose of collective bargaining, without fear of intimidation or coercion from their employers. Organized labor has consistently objected to the company union, largely because it is fostered by the employers on the theory that if collective bargaining had to come, it would be much better for employers to deal with employee representatives in their own organizations than with some outside person representing a trade or industrial union.

While most company unions have been dominated by the employers, this has not always been the case. On this point, the National Association of Manufacturers observes:[1]

> The term "company union," frequently used to describe this form of collective negotiation, is used chiefly by the labor unions in an effort to discredit this method of management-employee relationship. The term may, however, if it describes a unity of interests between the company and its workers, be considered meritorious.

An industrial relations officer makes an interesting distinction between the company-union and employee-representation plans. He states:

> A company union presupposes organization, officers, membership, insignia, everything that in a sense any regular trade union would have. It is simply a local union confined to membership in one plant or company, and more or less dominated or controlled by the company management. However, I should like to stress the difference between an organization of this type and an employee-representation plan. A representation plan in its simplest form has no organization, no ritual, no machinery, no officers, no by-laws, no constitution—except four or five items as to how elections and hearings are to be conducted. A representation plan can be written in 15 lines and it is a perfectly good one. When you talk of contracts, you could have a contract with the machinists' union as part of the A. F. of L., or with a company union; however, with a representation plan, you would not have anybody with whom to have a contract. The company becomes the central interest of all parties, each presenting his case but also giving concern to the whole.[2]

As generally used, the phrase company union refers to an organization of employees within a given company. It may or may not be company dominated, although it is likely to be, and has no connection with a regular labor union.

The third general type of employer-employee relationship is associated with a recognized trade or industrial union. This type of relationship involves conferences between the company's representatives and the official spokesmen of the union who are empowered to represent the employees in negotiations and collective bargaining. The Maritime Federation of the Pacific, for instance, had for years as one of its federated members the Pacific

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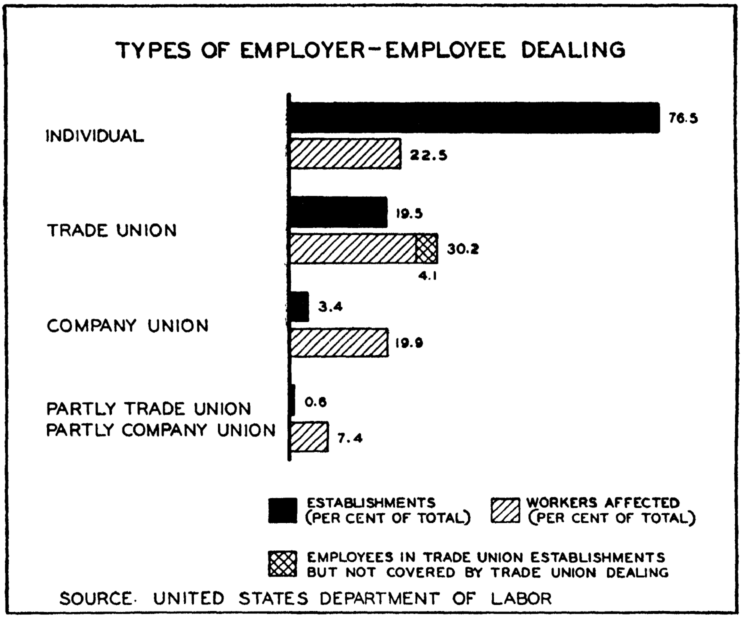
[1] Quoted in United States Bureau of Labor Statistics, *op. cit.*, p. 1.

[2] American Management Association, *Personnel Series* 19, 1935, p. 4.

Coast division of the old International Longshoremen's Association. The latter union, in turn, had its official organizers and business agents in various port cities on the Pacific Coast who, together with the officers of the local unions, negotiated with employers' representatives concerning working rules, the maintenance of discipline, all matters relating to port working conditions, and the interpretation of the general principles of the jointly determined trade agreement. All points of minor consideration in the conduct of longshore work were ironed out by the business agents and the labor relations committee, whereas broad questions of wages, hours of labor, and representation were settled by joint negotiation, or, under specified conditions, by arbitration.



SOURCE· UNITED STATES DEPARTMENT OF LABOR

FIG. 35.

The most important variations of each of these three general types of employer-employee relations will be considered in detail later. The extent to which these general types of joint relations exist in the United States is summarized in Fig. 35, which has been compiled from data covering 14,825 establishments employing 1,935,673 workers.[1] In analyzing these figures, it is important to remember how rapidly the picture has changed, especially in the period since the constitutionality of the National Labor Relations Act was upheld in May, 1937, and during the severe competitive struggle for membership between the American Federation of Labor and the Committee for Industrial Organization. It is also significant to note the different types of relationships existing in different sized establishments, as are indicated in Table 20.

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[1] *Monthly Labor Review*, October, 1935 (reprinted in "Types of Employer-Employee Dealing," *op. cit.*, p. 13). In the National Industrial Conference

Table 20.—Distribution of Establishments Dealing with Employees by Method Indicated According to Size of Establishment

Size of establishment	Total establishments		Establishments dealing—							
			Individually		With some or all workers through trade union		Through company union		Through company union and trade union	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
All establishments..........	14,725	100.0	11,267	100.0	2,866	100.0	496	100.0	96	100.0
1 to 49 workers......	9,394	63.8	7,987	70.9	1,345	46.9	57	11.5	5	5.2
50 to 99 workers......	1,937	13.1	1,428	12.7	453	15.8	53	10.7	3	3.1
100 to 199 workers......	1,424	9.7	939	8.3	388	13.5	82	16.5	15	15.6
200 to 499 workers......	1,220	8.3	633	5.9	403	14.1	134	27.0	20	20.8
500 to 999 workers......	430	2.9	171	1.5	162	5.7	73	14.7	24	25.0
1,000 to 2,499 workers......	225	1.5	63	0.6	90	3.2	56	11.3	16	16.7
2,500 to 4,999 workers......	70	0.5	14	0.1	21	0.7	29	5.9	6	6.3
5,000 workers and over......	25	0.2	2	*	4	0.1	12	2.4	7	7.3

* Less than 0.1 per cent.

Patterns of Nontrade-union Representation in the United States.—Nonunion joint-representation plans in the United States fall into two classes, namely, the *advisory* class, and the *arbitration* class. Employers who introduce the former type appear to be convinced that it is undesirable to give the rank and file of employees an effective voice in the determination of labor policies. A great many executives insist that employees do not favor the assumption of duties and responsibilities connected with the control of employ-

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Board study (see *Factory Management and Maintenance*, March, 1936, p. 108) substantially the same conditions are suggested to have obtained at a more recent date.

ment relations and do not wish to make decisions and exercise voting privileges. Hence the advisory shop committee with nothing but recommendatory powers. As one executive put it, "It is the duty of our works council to bring in recommendations; it is the management's responsibility to act according to its own judgment with regard to such advice." This suggests something of a travesty, perhaps, on the general principles of democratic control.

Employees do not seem to react favorably to plans of joint representation which confine their powers to the mere giving of advice, the acceptance or rejection of which rests solely with the management. Many companies have, therefore, introduced plans giving legislative powers to joint councils and providing for resort to arbitration in case of disagreement. Some employers are convinced that these broader features evidence good faith and create confidence in the intentions to give employees a voice in shop management.

1. *The Federal Plan.*—Whether an employee-representation plan is purely advisory or provides legislative functions and opportunity for arbitration, it is generally patterned after the *governmental* type, the *joint-committee* type, or the *employee-association plan.* Under the governmental or federal plan there is ordinarily a *lower house,* the members of which are elected by employees from their own number; a *senate,* composed of minor executives and supervisors; and a cabinet, consisting of the president and important officers of the company. This plan has been changed in many instances to meet the needs of particular companies. The house and the senate are often combined. Sometimes, both houses are composed of employee representatives. Where the congress consists of a single chamber of employee representatives, it is sometimes provided that there shall be two classes of members, namely, members at large, representing broad sections of the plant, and departmental members. This departure tends to assure an intelligent consideration of general policies and measures affecting the whole organization, as well as to guarantee a broad view of those problems that confront particular departments.

The method of handling routine business in the federal plan is somewhat similar to the ordinary legislative procedure. The house of representatives prepares bills on matters affecting the interests of employees and transmits them to the senate for consideration and action. If the senate concurs, bills are sent to the cabinet for final approval before becoming effective. Where the senate is abolished, the bills go directly to the cabinet. The veto power generally rests with the president.

The federal plan has been criticized as unnecessarily cumbersome and tending to preclude close contact between management and employees, because of the separate chambers. It is also objected that questions which concern only individual departments are unnecessarily brought before the whole body. The resemblance of the plan to the United States government is more apparent than real. In industry, the president, cabinet, and senate all represent a single class of people, namely, the owners; in our government all these agencies supposedly represent the whole people, who elect the President and the members of both houses of Congress. Then, of course, the President of the United States does not enjoy absolute veto power, a two-thirds vote of both houses being sufficient to pass a measure over his veto.

The effectiveness of any plan of employee representation depends not so much upon its form as upon its adaptability and the confidence and good will which it creates in the minds of those who are to benefit by its use.

2. *The Joint-committee Plan.*—Instead of the pretentious governmental plan, many companies have preferred a system of committees or works councils. The joint-committee system consists usually of two branches. There is first, the shop committee, which in actual practice may be representative of a shop, department, or division of the organization. This necessitates districting of the company into suitable units, just as a city is districted into wards which become the units of representation in the municipal council. These committees frequently are organized along departmental lines to deal with questions and problems affecting the interests of employees in the various divisions of the plant. In their capacity as representatives, the employee members of these committees are official mediators and adjusters of disputes and grievances arising between workmen and their immediate supervisors. It is their duty to meet in session with management's representatives for the purpose of considering matters of mutual concern and adjusting complaints arising in their jurisdictions.

There are many problems concerning the whole works which cannot be dealt with successfully by divisional or departmental committees. This explains the existence of the second branch of the shop-committee system variously known as the "general works committee," "general joint committee," "works council," "works assembly," and "general adjustment board." As these names imply, this committee is higher in authority and has broader powers than the shop or departmental committees. It is differently contituted in different concerns and may include all the shop committee members, or only a part of them, or members at large elected according to a specified basis. The general works committee or council cts as a supreme council of employer and employee representatives, itting as a court of appeals in matters submitted to it by the divi-ional committees and adjusting differences which arise between the whole working force and the plant management. Although its unctions are often primarily judicial in those plants that have shop ommittees with broad powers, the general works council is frequently endowed with legislative powers also, and, in many cases, hop committees constitute its subordinate functional agencies.

Companies having many plants or offices find it necessary to provide for a general council or assembly, in addition to the works ouncils and shop committees of the various plants. The general ouncil or assembly convenes at the call of the president of the ompany. Half of its members are elected by the workers' repre-entatives in the councils of the plants concerned with the problem under consideration. An equal number of members representing management are appointed by the president or chosen by their ellow representatives in the plant councils. The general council is really a court of appeals whose constituency changes as different groups of plants are involved in a controversy. Seldom is it a eneral assembly of representatives from all the plants.

The joint-committee type of employee representation is found n the majority of industrial plants operating these plans in the United States. The committee type is considered more flexible han the federal plan and seems to offer better opportunities for ntimate contact between the representatives of management and employees in many industries. Departmentalization of committees, moreover, makes possible more expeditious adjustment of disputes between employees and their immediate supervisors.

The representatives of management in these joint departmental ommittees, works councils, and general councils are usually appointed by the management itself. This is logical, since management is centralized and unified and its representatives are expected lways to reflect a common point of view. Such representatives ome from the official family of chiefs, assistants, department heads, foremen, and other minor and major executives. Not uncommonly, management's half of the shop committees consists f foremen or supervisors, and its representatives on works councils are higher executives, such as assistant managers, heads of departments, and superintendents.

Should committees be joint, that is, composed of representatives of the company and representatives of the employees? Or, should separate committees be provided for each party, with provision for joint sessions as occasion requires? Each form of organization has distinct advantages. The predominant tendency has been toward joint committees. The principal advantage of the joint committee is that it brings representatives of both sides around the conference table at regular intervals. This permits constant exchange of points of view and promotes mutual understanding. Its fundamental weakness is that employee representatives are reluctant to express themselves freely and frankly in the presence of the supervisory executives who represent the company.

3. *The Employee-association Plan.*—In order to avoid any feeling of repression, some organizations have found it desirable to provide that all initial deliberations shall be conducted by committees made up wholly of workers, who meet with a management committee for the purpose of collective bargaining. This plan is an attempt to gain the consent of all the workers to a system of representation through a company union or employee association. Sometimes, this plan provides that the duly elected officers of the association shall have power in determining what course of action shall be taken when employee demands are not met. Usually, however, such power can be exercised effectively only through a relatively strong labor union. The employee-association plan is actually an attempted substitute for unionism; it is essentially an "independent" company-union type of organization taking preliminary steps in approaching management upon all questions relating to the work and welfare of employees and meeting executive committees in "joint council" on the more important issues which may arise from time to time. Sometimes, in order to gain more effective bargaining powers, the employee association affiliates itself with an outside labor organization, as was the case at the termination of the Douglas Aircraft Company strike in the spring of 1937. At that time, the old Douglas Employees' Association merged itself into the United Aircraft Workers' Union, a new independent industrial union designed for aircraft workers in general, but affiliated with neither the A. F. of L., nor the C. I. O. When this action is taken, the representation plan then loses its distinction of being a nonunion type of organization. The uncertainty of the company union's status under the National Labor Relations Act is resulting in the development of "independent unions" which contend they are not

company dominated, refuse affiliation with the A. F. of L. and the C. I. O., and accept legal incorporation.

Reasons for the Growth of Employee Representation.—A congeries of motives has impelled employers to grant to their employees the privilege of representation in the determination of standards of employment and the control of betterment activities. The spirit of self-interest is manifest on all sides. Management has desired to safeguard its own interests, achieve certain cherished ideals, and direct industrial processes to its own advantage. The intricate structure of the business organization makes it difficult, if not impossible, to achieve these ends unless there is provided a formal medium of conference between management and workers concerning certain phases of the personnel program. The conference table, around which representatives of the company and employees gather to consider matters of mutual interest, affords a rational and effective check upon premature judgments and hasty action. Discussion is far better than subtle forms of protest.

The majority of American employers who have accepted the principle of joint administration have preferred that these conferences shall be held between representatives of management and representatives of employees within each plant. This preference is often a sequel to the aggressive action of labor organizations in seeking the unionization of a trade or industry. It is perhaps no less often a by-product of the hope of forestalling anticipated unionization. This was manifested in the formal statements of employers' representatives at the First Industrial Conference called by President Wilson in October, 1919, for the purpose of formulating a workable program of industrial harmony:

> The principles of individual liberty and freedom of contract upon which our institutions are fundamentally based require that there should be no interference with the open shop, that membership or non-membership in any association is not made a condition of employment.[1]

Hence there must be

> . . . some form of shop organization in which representatives of the management and representatives of the men in the individual establishment, selected in each case from their own number, should meet for full and frank discussion of all phases of the employment relation. . . . There should be no representative of either party from the outside except with the consent

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[1] First Industrial Conference, *Proceedings*, Washington, 1920, p. 82.

of the other party, for discussion should be confined to those who know the situation and who have no outside interest.[1]

Employers continue to take the same attitude and position with regard to joint relationships. In other words, shop-committee systems are desired as a substitute for traditional unionism. This is clearly illustrated by the preponderance of evidence brought forth during the course of the Senate hearings on the violations of free speech and the rights of labor during the seventy-fifth Congress.[2] It should not be concluded that this is true in all cases. Many employers in such industries as clothing manufacture and coal mining have found it advantageous to deal with representatives of a national trade or industrial union. In this way, more uniform competitive conditions have been established, because practically all employers negotiating trade agreements with the union are required to maintain the same standards of wages, hours, and conditions of employment.

It would be erroneous to assume, moreover, that the defeat of unionism is uppermost in the mind of every employer who inaugurates a plan of joint control. Many have introduced such plans in the hope of increasing efficiency and eliminating wastes. Underlying this hope is the basic assumption that if workers are given an opportunity to examine costs, discover the enormous waste of inefficient work, and, directly or indirectly through their representatives, suggest ways and means of improving industrial technique, processes, and organization, they will take a more active interest in the economical and efficient operation of the plant.

Many other motives have influenced employers in introducing representation plans. The desire for industrial harmony, the inclination to experiment with something approaching democratic control of the workshop, and, in a few notable instances, the sense of religious and moral responsibility issuing in the application of the golden rule to industry have had a definite influence. There can be no doubt, however, that the prevailing factor in most instances has been the predisposition of employers to establish a form of collective bargaining more to their own liking than the ordinary type of unionism. It has been the employers' action in pressing toward the fulfillment of this desire that is partly responsible for the National Labor Relations Act and for movements toward other regulatory and protective legislation in the several states.

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[1] *Ibid.*, pp. 240, 241.

[2] See Committee on Education and Labor, *Hearings before a Subcommittee of the Committee on Education and Labor*, United States Senate Resolution 266, 1936–1937.

CHAPTER XXXIII

EMPLOYEE REPRESENTATION PLANS IN OPERATION

General Purposes.—Employee-representation plans have certain general purposes in common which identify them as members of the same species. Uninterrupted production, elimination of waste, improvement in methods and processes, and reduction of unit labor costs are general objectives in every progressive enterprise. Employers realize that the achievement of these ends is definitely related to industrial cooperation and good will. But good will and cooperation are dependent upon such factors as an equitable scale of wages, desirable conditions of employment, reasonable hours of work, opportunity for self-expression, and a measure of participation in the government of the shop or office.

These factors are the legitimate objects of collective bargaining, and collective bargaining implies the existence of established channels of communication between management and employees. This involves periodical conferences for the determination of the terms of employment and the creation of machinery for the consideration and adjustment of grievances and complaints. Joint determination of conditions of employment and the amicable settlement of disputes are, then, the general aims of employee representation.

Essential Preliminary Steps.—Many joint-representation plans have failed because they were introduced hastily. Three preliminary steps are essential. The idea of joint control must be thoroughly sold to both management and employees, a suitable plan must be constructed, and a sound foundation must be laid for the execution of the provisions of the plan. Like individuals, business and industrial concerns differ, so that local conditions must be taken into consideration in the formulation of any scheme designed to improve employment relations. It is necessary to define the objectives of any plan of representation so clearly that there will be no misapprehension concerning them. The organization and functions should be such as to make possible a real measure of democratic control. Amending clauses should be liberal in order to permit the changes that experience proves desirable. In the formulation of the plan, the interests of both employers and employees should be safeguarded and every precaution taken to avoid suspicion and distrust.

After the tentative draft of the plan is completed, there should be a joint conference of representatives of management and employees for the purpose of examining its provisions with a view to adoption. Employees' representatives should be elected by all those workers who do not have supervisory or managerial positions; no person filling the latter positions should be allowed to represent the workers. The representatives of management are appointed. In this initial conference, it is essential that employee representatives and management representatives be absolutely free to suggest such changes and modifications as seem practicable. Final adoption of the plan should be by a special election arranged for that purpose.

Organization and Powers.—Considerable variation obtains in the general structure of employee representation plans. Broadly speaking, their organization and powers are determined somewhat by their relation to trade unionism. As previously suggested, the vast majority of shop-committee systems in the United States have been introduced in establishments operating on the so-called "open-shop" basis, which is a nonunion basis. It has been estimated that over 95 per cent of the plants that have works councils actually operate on the open-shop principle.[1] In such cases, two of the three dominant classes of representation plans exist, namely, the *governmental plan* and the *committee plan.*

Joint-representation plans have been classified according to the degree of power given them.[2] It is evident that many have advisory powers only, although most of them have legislative powers, with resort to arbitration when the representatives of both sides fail to agree. In a relatively few cases, employees are given representation on boards of directors, thus having nominal power at least to shape company policies. Then, there are plans constructed on a friendly and democratic attitude toward labor unions, but these in reality are functioning in connection with such unions and ordinarily have greater powers than the nonunion-shop councils.

The organization of joint-representation plans may be sufficiently comprehensive to cover an entire industry and, if applied to every industry, may include an entire nation. This form of industrial government presupposes the existence of associations of employers and unions of employees, such as the Waterfront Employers' Asso-

[1] MYERS, JAMES, *Representative Government in Industry*, p. 85.

[2] Compare MYERS, *op. cit.*, Chap. IV.

ciation of the Pacific Coast and the Maritime Federation of the Pacific which, through their respective representatives, meet at certain intervals to draw up working agreements governing the conditions of employment. The movement for joint councils covering an entire industry received great encouragement from the report of the Whitley Committee. Following the World War, there was considerable experimentation with such a system of joint councils, not only in England, but in Germany and the United States as well.

Basis of Representation.—For purposes of representation in shop committees and works councils, an organization is divided into shops, sections, districts, departments, or some other appropriate units. The task of districting the company, which is best done by a joint committee familiar with the entire organization, is not difficult in centralized establishments. In multiplant organizations, such as one finds in the great industries, it is a heavy responsibility because of variations in departments and decentralization of the working force.

There is usually a numerical basis for representation, with a minimum number of representatives for each voting division regardless of size. The following provision is typical:

> The basis of representation shall generally be one employee representative for each two hundred to three hundred employees, but in no case shall there be less than five employee representatives in the works council.
>
> In order that the different departments and crafts may be fairly represented each works shall be divided into voting divisions, and each division shall be assigned its proper number of representatives, based upon the average number of persons employed therein during the month of December preceding the election.
>
> The works council may change the voting divisions whenever necessary to secure complete and fair representation.[1]

Qualifications of Employee Voters and Representatives.—With the exception of those who are official representatives of the company, that is, those who occupy supervisory positions, all employees on the payroll are usually entitled to participate in the joint representation plan and to vote for employee representatives. Sometimes, however, a period of service of one to several months or membership in the employees' association is required.

Foremen, assistant foremen, and other salaried employees of the executive force are not eligible for nomination as employee representatives. All other employees who are eligible to vote and who have other requisite qualifications may become candidates. A nominee must be employed in the unit of the plant which he hopes to represent, and, in some cases, he must have served in that division a certain number of months. It is generally stipulated, moreover, that only employees who are citizens of the United States or have their first naturalization papers, who are twenty-one years of age or over, and who have been continuously in the service of the company in the particular plant for 1 year immediately preceding nomination, shall be eligible for nomination as employee representatives. Membership in the employees' association and 2 years or more of continuous service are sometimes required.[1]

---

[1] International Harvester Company, *The Harvester Industrial Council,* Art. iv, pp. 6, 7.

Nominations and Elections.—Ordinary election procedure obtains in all cases. Notice of the time of nominations and elections is posted several days prior to their actual occurrence. Nominations are made several days before the date set for the election, each employee being free to nominate anyone he chooses, within the limits of eligibility. The two persons receiving the highest number of votes in their respective voting divisions are declared nominated. The secret ballot is used. On the election ballot, the names of the successful nominees appear in the order of the number of votes received at the "primary." The candidate receiving the highest number of votes at the election is declared elected to serve for 1 year in the works council or assembly. Special elections are provided to fill any vacancy that may occur. Members of the council are usually eligible for reelection. Every effort is made to safeguard the integrity of elections through joint supervision of the polls and scrupulous counting of ballots.[2] In cases involving a choice of bargaining agencies within organizations subject to the National Labor Relations Act, the regional office of the National Labor Relations Board supervises the election and announces the results. The details of this plan are discussed in the following chapter.

Immediately upon the election of employee representatives, the management announces its appointees to the council, the number of representatives of each side being equal. Management representatives are chosen from any section of the company, and any person who has supervisory duties is eligible for appointment under most plans. Either the president of the company or his official representative, usually the plant superintendent, is responsible for filling vacancies occurring on the management side of the council.

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[1] Pennsylvania Railway Company, *Employee Representation*, Art. iii, p. 75.

[2] Compare, Swift and Company, *Employee Representation Plan*, Art. iv, pp. 20, 21.

Practically all joint-representation plans provide for the recall of any employee representative whose services become unsatisfactory to the employees of his voting division. A recall usually requires a petition signed by not less than one-third of the constituency concerned, and a special election is held for determining whether a representative shall be recalled or continued in office. In such an election, a majority of the employees in the voting division must vote for recall, otherwise the representative continues in office.

Organization and Meetings.—The manager of industrial relations, acting under the direction of the president or the vice-president in charge of personnel, usually has charge of the joint representation plan and is generally designated by the company as chairman of the works council. The secretary is usually appointed by the plant superintendent. Neither of these officers has a vote. The transaction of all business requires a quorum of each class of representatives. Standing and special committees are appointed by the works council to deal with special problems, management and employees being equally represented on all committees. Works councils hold regular meetings at stated times and special meetings upon the call of the chairman, the secretary, or a prescribed number of representatives. Subordinate committees meet as necessary.

Employees serving on committees and councils in times past have been paid their regular wages for the time consumed in the performance of their duties in this connection. Often, however, it has been provided that employees may compensate their own representatives if they wish to do so. The cost of preparing and distributing the reports of the works council is usually borne by the company. Where the active agent is the employees' association, a great degree of independence is exercised by the personnel department and the management in general.

Duties and Powers of Works Committees and Joint Councils.—Employee- and union-management cooperation in the matter of industrial relations is gained, as has been seen from the previous chapter, either through some form of employee representation or through direct dealings with labor unions. In organizations in which employee-management relations have been established through some employee-representation scheme, definite duties and powers are usually prescribed. Works councils are often authorized to consider and make recommendations on all questions relating to employment conditions, although wages are omitted from the list of subjects in the less liberal plans. Opportunity is generally given for the presentation of any matter which is of sufficient importance for joint discussion. The works council, either on its own motion or at the request of the management, may investigate any conditions which appear to be disrupting peaceful relations and confer with the superintendent or other appropriate executive concerning them. Although the execution of all decisions may be retained by management, the advice of the works council is often sought with regard to the best manner of applying them.

Generally speaking, the functions of the works council or committee fall into five major groups: the cultivation of mutual understanding and more intimate relations between management and employees; the joint determination of employment conditions; the adjustment of complaints and disputes; the improvement of production technique; and the administration of welfare services.

1. *The Cultivation of Mutual Understanding.*—From the standpoint of the employer, the universal function of joint representation is the promotion of a better understanding between management and workers. It has been stated repeatedly throughout our study that the widening breach between principal executives and the rank and file of employees is the source of great misunderstanding. The works council functions to establish more intimate relations and to remove the false conceptions which employer and employee often have of each other. It is hardly conceivable that the average worker will take his grievances directly to the major executives of the plant. He would be too embarassed to do so and might suffer unpleasant consequences at the hands of his immediate supervisor. The works council can do this for him with greater effectiveness and with impunity.

2. *Collective Bargaining.*—Although many nonunion shop committees deal only with certain welfare services, the primary and natural function of any form of joint representation is collective bargaining concerning the provisions of the labor agreement. The workman is at a serious disadvantage when he attempts to bargain individually with the employer concerning such important matters as wages, hours, and conditions of employment. His position is greatly strengthened when he unites with his fellows for the purpose of collective negotiations. Denial of the right of collective bargaining is a contravention of the basic purpose of democratic control, and among many enterprises is now a violation of the law. Whether the plan of joint representation functions as an integral part of the

so-called "company union" or in connection with a regular labor union, joint consideration and determination of the terms of employment are the essence of industrial democracy. Although the earlier councils introduced by the employer were not always permitted to deal with such controversial matters as wages and hours, the majority of contemporary works councils enjoy this power. Ever since its inception, of course, trade unionism has functioned in this sphere.

3. *Adjustment of Grievances and Complaints.*—The prompt settlement of disputes is of supreme importance in the maintenance of peaceful human relations. The common practice of providing special agencies for the impartial hearing and judicial adjustment of grievances does much to lessen the number of differences that arise between employees and their immediate supervisors. Supervisors will be less likely to treat their working force unjustly, and employees will be more likely to obey the reasonable rules of the office, if they know that all complaints will be aired freely before an impartial tribunal. Grievances of a purely local nature are normally considered by the employee representative and the foreman concerned. Failing adjustment here, the matter goes to the shop committee or a special committee in charge of disputes, either of which may function directly under the supervision of the works council. If the committee cannot effect a settlement, the works council itself endeavors to do so. In multiplant concerns, the dispute goes next to the general council presided over by the president of the company. If this body fails to reach a satisfactory decision, there is usually provision for a board of arbitration consisting of one member selected by the employees, one chosen by management, and an impartial chairman selected by these two.

4. *Control of Production Technique.*—The organization and direction of technical forces constitute a province which is often considered to be outside the legitimate scope of joint control. By specification or implication, employee representation plans often reserve for management full power in such matters as transfer and promotion, dilution of labor, hiring and firing, improvement in processes, introduction of machinery, and financial policies. Either because of lack of experience in handling such affairs or because of an unwillingness to assume responsibility, employees have not usually asked for a voice in the control of technical matters. Joint determination of working rules might prove mutually beneficial.

It may be admitted that, according to the traditional individualistic concept of industrial control, wage earners have no right to share in the functions of management, and yet, the question may appropriately be raised whether it might not be expedient to enlist the workers' cooperation in the solution of such problems. Many employers are beginning to think that such a step is expedient, if not imperative. An experienced and successful manager of industrial relations observes, "The American workman is satisfied to let management do the managing." But he adds, "In our company, we have found the works council group a splendid medium for obtaining the cooperation of workmen in making suggestions for the improvement of machines, tools, and methods."[1]

There is considerable wisdom in teaching the workers something about the problem of management. The sharing of business information with employees has invariably stimulated interest in the company, its policies, problems, and progress. The average worker has only the haziest notion of the nature and functions of business, and he is strangely impressionistic in accepting unauthentic rumors of big profits and ulterior motives of management. "If employees are kept in ignorance of the ideals, objectives, and policies of management, it is natural that they should be curious and willing to listen to any one who presumes to be in possession of the facts, whether right or wrong."[2] This opinion of an industrial executive is shared by an increasing number of employers.

Gratifying results have been obtained by discussing frankly with employees directly, or indirectly through their council representatives, such important matters as the annual balance sheet; general financial status of the company; overhead charges; cost of spoilage and scrap; quantity and quality production in relation to the prosperity of the company; and the expense involved in maintaining machines, tools, and equipment. Employees need to understand that cooperation in keeping down costs is essential if the firm is to compete successfully in the open market and thus continue to furnish employment. Economy committees composed of representatives of management and employees are becoming increasingly common and are evidence of the growing conviction that it pays to enlist the cooperation of wage earners in solving technical problems of management.

But many employers fear to give employees a voice in the control of production and shop discipline, even though they are assured in their own minds that such a step would promote economy and efficiency. The right to participate in the management of technical factors, which would inevitably follow the socialization of industry, might prove advantageous even under the existing order with its predominantly private ownership and individualistic control. If one fears socialization, which is an essential part of all collectivist programs, one may be consoled by the fact that the expansion of democratic control of managerial functions might prove an effective antidote to socialism. Certainly such experience on the part of the workers would tend to make them conservative and would prove a welcome shock absorber in the event that socialism should become inevitable. Responsibility generally conduces to thoughtfulness, considerateness, and conservatism. Employers have repeatedly demonstrated this by giving radical labor leaders positions of responsibility, thereby winning them over to the capitalistic point of view.

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[1] Kelday, G. J., "Employee Representation Technique," American Management Association, *Production Executives' Series*, no. 49, pp. 45, 46.

[2] Badger, H. L., American Management Association, *op. cit.*, p. 43.

But the task of securing the cooperation of employees in solving problems of management is usually a very difficult one. Workers are reluctant to wrestle with technical difficulties and to assume managerial responsibilities. This may be due to the fact that there is no incentive unless they are given a share in the profits of the enterprise, or it may be because they have never been expected to have this larger interest.

5. *Control of Welfare Services.*—There are many activities outside of the regular employment relations which are often shared jointly with employees. These include such services as indoor and outdoor recreation, social functions, cooperative buying, mutual aid in illness, general credit extension, death benefits, group insurance, financing and constructing of homes, and citizenship training. Through their mutual benefit or employee associations the workers are given an opportunity to supervise such services. Joint or complete employee administration of these matters tends to diminish paternalism and to preclude the development of many of the abuses and evils commonly associated with the company town.

Typical Employee-representation Plans.—A recent survey of 2,452 business establishments, representing all major industries throughout the United States,[1] disclosed the fact that some form of employee-representation is in operation in about 30 per cent of the number covered, or in a total of 751 companies. As is the case in many establishments throughout the nation maintaining some forms of representation which were not covered in this study, many different plans are to be found within the companies surveyed.

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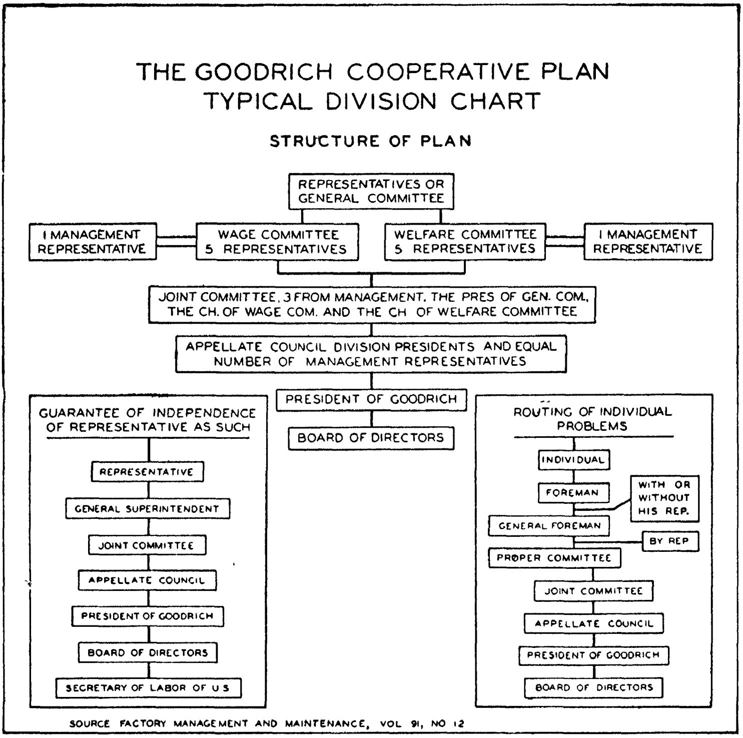
[1] National Industrial Conference Board, cited in *Factory Management and Maintenance;* vol. 94, no. 3, March, 1936, p. 108.

Only a few of the better known plans need be briefly reviewed here as illustrative of the technique of employee representation.

In order to provide a means of promoting closer industrial relations between its management and workers, the Goodrich Tire and Rubber Company several years ago organized what is known as the Goodrich Cooperative Plan. Even though this method of collective bargaining has now given way to outside union organization, the plan well illustrates general principles used in many of the larger organizations throughout the nation. The general structure of the plan is summarized in the accompanying chart. Under the scheme, representatives were elected annually by properly qualified employee voters. These representatives composed the "general committee" which in turn elected a president, vice-president, secretary, and the five members of the wage and welfare committees, including the chairman of each of these two bodies. It was the duty of the wage


THE GOODRICH COOPERATIVE PLAN
TYPICAL DIVISION CHART
STRUCTURE OF PLAN
REPRESENTATIVES OR GENERAL COMMITTEE
1 MANAGEMENT REPRESENTATIVE
WAGE COMMITTEE 5 REPRESENTATIVES
WELFARE COMMITTEE 5 REPRESENTATIVES
1 MANAGEMENT REPRESENTATIVE
JOINT COMMITTEE, 3 FROM MANAGEMENT. THE PRES OF GEN. COM., THE CH. OF WAGE COM. AND THE CH OF WELFARE COMMITTEE
APPELLATE COUNCIL DIVISION PRESIDENTS AND EQUAL NUMBER OF MANAGEMENT REPRESENTATIVES
PRESIDENT OF GOODRICH
BOARD OF DIRECTORS
GUARANTEE OF INDEPENDENCE OF REPRESENTATIVE AS SUCH
REPRESENTATIVE
GENERAL SUPERINTENDENT
JOINT COMMITTEE
APPELLATE COUNCIL
PRESIDENT OF GOODRICH
BOARD OF DIRECTORS
SECRETARY OF LABOR OF U S
ROUTING OF INDIVIDUAL PROBLEMS
INDIVIDUAL
FOREMAN
WITH OR WITHOUT HIS REP.
GENERAL FOREMAN
BY REP
PROPER COMMITTEE
JOINT COMMITTEE
APPELLATE COUNCIL
PRESIDENT OF GOODRICH
BOARD OF DIRECTORS

SOURCE FACTORY MANAGEMENT AND MAINTENANCE, VOL 91, NO 12

FIG. 36.

committee to deal with all questions relating to hours of work; rates of pay; and matters pertaining to employee earnings, such as wages, piece rates, work distribution, rate inequalities, and premium payments. The welfare committee handled all problems of health, recreation, safety, vacations, seniority rights, relief funds, insurance, and pensions.

Under this plan the management also appointed a "management representative" to work in a consulting and advisory capacity with each of these two committees. Before any matter referred to either the wage or welfare committee was passed on to the "joint committee," the recommendation of the appropriate management representative had to be obtained. The joint committee was composed of three management representatives and three employees who were the president of the general committee and the chairmen of the two other committees.

Operation of such a plan is quite simple. When any individual employee has a problem or complaint, the difficulty is first taken up with his immediate supervisor. If no satisfactory settlement is gained here, the issue is placed in the hands of his representative who presents it before a general committee for action. If the general committee feels that the employee has a just complaint, it attempts settlement; failing in this, it presents the matter successively to a joint committee, which assigns the problem either to a wage committee or a welfare committee. The decision returns to the joint committee itself, the appellate council (which acts as another review board), the president of the corporation, and finally, if necessary, to the board of directors before being officially adopted.

When an issue involves a group of employees rather than a single worker, it is reduced to writing and presented to the representatives, whose duty it is to call for a hearing before authorized employee spokesmen and management representatives. Failing settlement after this airing of the difficulty, the issue is then placed in the hands of the president of the general committee who assigns it to the wage committee or the welfare committee, depending upon the nature of the trouble. Failing a satisfactory adjustment here, the matter may be referred through successive steps to the board of directors. This same procedure is generally used by management in gaining an adjustment of its problems. An interesting characteristic of the Goodrich Cooperative Plan was that it applied to the company's office workers as well as shop workers, thus discarding the traditional belief that there is no need of employee representation among office workers since they are close enough to headquarters to have their wants and complaints known without formal representation machinery.[1]

The oldest cooperative plan among department stores is that of the Filene Cooperative Association, established by William Filene's Sons Company of Boston. The association is composed of all regular employees with a minimum of 30 days company service who desire to become members. The Filene Cooperative Association is governed by officers and a council chosen by the association members. The council is composed of representatives chosen semiannually from the various departments of the store and of four management representatives of the board of directors. This joint council has power to consider any subject which has reference to the working conditions or welfare of employees. Employee members have the right, through their elected representatives, to change any store rule which is arbitrary or unfair. By means of a two-thirds majority vote, the council may suspend, amend, or abolish any store rule. Further democratic control is assured in the provision that any act of the management in vetoing a two-thirds majority ruling of the council may be overridden by a two-thirds majority vote of members of the Filene Cooperative Association.

Four out of the eleven members of the board of directors represent the Filene Cooperative Association, and these director-representatives have direct access to the accounts and statistics of the store's business and help shape the general policies of the company.[2] The Filene plan further provides for an arbitration board, composed entirely of employees elected by secret ballot, before whom any Filene Cooperative Association member may appeal against any injustice in wages, discharges, working conditions, or other employment relations, and whose decision is final and binding. In order to facilitate the work of this board and to encourage close relationships between supervisors and employees, an Employee Relations Committee has recently been established. This committee acts "as an intermediary between the management and the Filene Cooperative Association on matters involving the general welfare of the employee body, and more specifically to consider the request of any group or groups of not less than three members each for an adjustment in working conditions and to make recommendations to the management for such changes in working conditions as it may deem to be desirable."[1]

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[1] *System*, vol. 63, August, 1934, pp. 372–373.

[2] William Filene's Sons Company, *Store Rules and Information*, February, 1934.

The Philadelphia Gas Works Company's employee-representation plan was first proposed in the fall of 1934. Under the adopted plan the organization is divided into various election groups, and each group chooses its employee representatives who together make up the general council which is the general governing body. Employee representatives within an "election group" form what is known as a "local council," and the several local councils within any given department of the company form, for the purpose of conferences, a "departmental council." Four standing committees are set up from within the general council. A conference committee, made up of employees from five of the company's major departments, serves as the medium of contact between the management and the council. A committee on rules, made up of three members appointed by the council chairman and approved by vote of the general council, is responsible for rules of organization and procedure of the council. The wage and hour committee is composed of three representatives appointed by the council chairman, and has charge of general problems of job graduation, rate limits, hours, and the like. Finally, a committee on elections determines all procedures relating to elections, balloting, and eligibility. The general purpose of this organization is to provide better relations through collective bargaining and worker-representation in matters relating

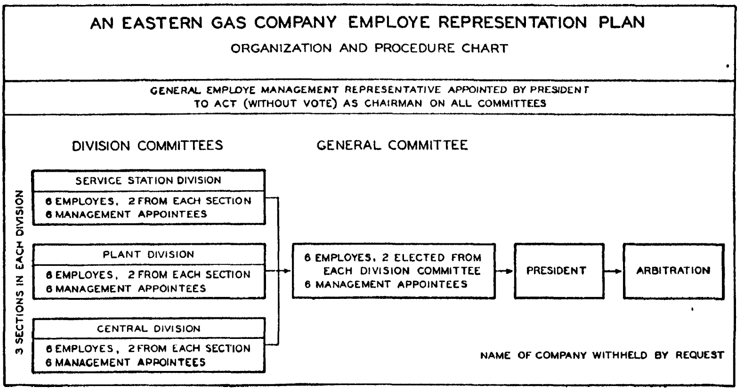
AN EASTERN GAS COMPANY EMPLOYE REPRESENTATION PLAN
ORGANIZATION AND PROCEDURE CHART
GENERAL EMPLOYE MANAGEMENT REPRESENTATIVE APPOINTED BY PRESIDENT TO ACT (WITHOUT VOTE) AS CHAIRMAN ON ALL COMMITTEES
DIVISION COMMITTEES
GENERAL COMMITTEE
3 SECTIONS IN EACH DIVISION
SERVICE STATION DIVISION
6 EMPLOYES, 2 FROM EACH SECTION
6 MANAGEMENT APPOINTEES
PLANT DIVISION
6 EMPLOYES, 2 FROM EACH SECTION
6 MANAGEMENT APPOINTEES
CENTRAL DIVISION
6 EMPLOYES, 2 FROM EACH SECTION
6 MANAGEMENT APPOINTEES
6 EMPLOYES, 2 ELECTED FROM EACH DIVISION COMMITTEE
6 MANAGEMENT APPOINTEES
PRESIDENT
ARBITRATION
NAME OF COMPANY WITHHELD BY REQUEST

FIG. 37.

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[1] Quoted in Industrial Relations Section, Princeton University, *Personnel Programs in Department Stores*, p. 78.

to wages and working conditions. The procedure followed by another large gas company is presented by means of Fig. 37.

In order to secure a settlement of all problems arising between employees and management, the Atlas Tack Corporation has used a representation plan built around an "assembly" consisting of an equal number of employee and management representatives. The assembly is divided into three standing committees (procedure, interpretations, and working conditions) and such others as the assembly may deem necessary to appoint. Decisions are reached by a two-thirds concurring vote of the assembly and are binding on both parties unless within 2 weeks either group requests the assembly to reopen the matter for further consideration. If, after reconsideration by the assembly, no satisfactory agreement on an issue can be reached, employees and management are allowed to take such action as they deem desirable outside the plan. This action does not terminate the general use of the plan, but merely indicates that an attempt was made to settle a specific issue that could not be adjusted under the plan.

Before cases are referred to the proper committees under the Atlas plan, the regular company authorities are given an opportunity to hear the complaint and make adjustments. If no settlement can be reached in this manner, the aggrieved party may take the matter up with his representative who consults the management representative having jurisdiction in the particular case, who in turn attempts to effect a settlement. Still failing, the case is then sent to the committee on disputed plant rulings, whose decision is final, provided it is by unanimous vote. If it is not, the matter is then referred to the assembly for action. Matters within the jurisdiction of other committees are handled in a similar way.

One of the large Eastern transit companies has had an employees' representation plan in successful operation for approximately 15 years. Representatives are elected in the respective departments or subdivisions thereof on a basis made with regard to the natural divisions of the subsidiaries of the transit company and logical groupings and location of employees. The surface transportation department employees are in Group *A*; the conductors and trainmen, including line and terminal forces of the transportation department, belong to Group *B*; and so forth. Any matter which, in the opinion of the employee, requires adjustment, and which the employee has been unable to adjust with the foreman or official in charge of the work on which he is engaged, may be referred to the representative of the voting unit in which the employee works.

If the representative considers the matter worthy of attention, he presents it to the foreman or official in charge of the work for discussion and adjustment. From there, if it is not satisfactorily settled, it is taken up with the head of the department; if it is not then adjusted, the representative and head of the department may take it up with the management. In the past, the management has paid employees at their regular rates for all time actually lost on account of time devoted to their duties as representatives.

There are many other plans in successful operation, but the few described above contain the general characteristics of all such schemes. It must be remembered that changes in the organization of employee-representation plans have been made in rapid succession during the past few years. For this reason, the details of plans described in this chapter must be taken as only illustrative of what the inauguration and maintenance of an employee plan involves.

Accomplishments of Representation Plans.—The results of employee representation are not capable of mathematical measurement. It has not proved a workable substitute for efficient management nor a panacea for all the ills of industry. No rational person ever expected that it would. The condition of the workers, with regard to housing, health, education, and recreation, has been greatly improved, especially in single-industry towns. Employees have been protected against arbitrary discharge, abusive language, and numerous possibilities of injustice and oppression which formerly existed under that industrial system in which workers were forced to remain inarticulate concerning even obvious grievances.

Management has learned to take a broader and more liberal view of its responsibilities to the workers. There has been a process of mutual education in most plants where joint councils have been introduced. In many instances, standards of wages, hours, and conditions of employment have been improved, although many plans have manifested a fundamental weakness in failing to deal effectively with such controversial matters. Employees have learned to take a deeper interest in the employment relation and also in the technical phases of the industry. Employers testify that workers' representation in the councils of industry has had a salutary effect upon economy, efficiency, and good will. As yet, it can hardly be claimed that these experiments in employee government have provided a real constitution for industry or established a partnership for labor. Nevertheless, joint-representation plans constitute an important step in the direction of democratic control and, if carried to their logical conclusion, will do much to abolish the autocratic administration that traditionally has been associated with industry.[1]

Constitutional Government under Trade Agreements.—The erroneous impression is sometimes created that experiments with democratic control of employment relations have developed entirely outside of the regular trade-union movement. The truth is, of course, that joint control had its inception with the adoption of collective bargaining by the modern trade union, and that, compared with the bargaining committees of the independent labor union, the works-council systems inaugurated by employers are but infants.

As agencies of joint administration, trade unions have functioned through shop stewards, representatives, union committees, and joint councils entrusted with the responsibility of safeguarding the integrity of what is known as the trade agreement. The trade agreement is in its very essence a constitution for industrial relations. The whole scheme of industrial government under unionism has centered around agreements with employers which embody the fundamental principles, regulations, and methods of procedure governing employment relations in various industries. The formulation of such agreements and their local interpretation and application have necessitated joint conferences of employers' and workers' representatives. In so far as one may speak of governmental organization in industry, these joint conferences may be appropriately referred to as industrial parliaments. Recent years have witnessed the development of a new form of joint conference commonly referred to as the national joint council, which attempts to deal with the more general and technical problems of given industries.

Joint councils for the purpose of formulating trade agreements are indispensable wherever employers deal with trade unions. The fundamental function of unionism is collective bargaining with regard to such vital and invariably controversial matters as wages, hours of employment, conditions of work, and safeguards for health and life. This involves negotiatory relations with the employer. Joint conferences, consisting of the duly elected or appointed representatives of employers and of workers, are held periodically for the purpose of agreeing upon the terms of employment for a given length of time, usually for one or two years. The decisions of these conferences are incorporated into a formal trade or working agreement which regulates the conduct of each enterprise in which the particular union is recognized. In other words, these joint conferences are legislative bodies enacting laws which employers and employees are expected to obey. Such conferences are found in numerous industries in advanced industrial countries, where wage earners have been able to organize and gain recognition of the principle of collective bargaining. In the United States, for example, associations of employers regularly negotiate agreements with such organizations as the Cigar Makers' International Union, the United Brotherhood of Carpenters and Joiners, the International Typographical Union, the Amalgamated Clothing Workers of America, the Railroad Brotherhoods, the United Mine Workers of America, the United Automobile Workers of America, the International Brotherhood of Teamsters, the International Longshoremen's and Warehousemen's Union, and the International Seamen's Union.

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[1] For a critical study of results in specific cases, the reader is referred to the following works: B. M. SELEKMAN and MARY VAN KLEECK, *Employees' Representation in Coal Mines*, 1924; B. M. SELEKMAN, *Employees' Representation in Steel Works*, 1924; JAMES MYERS, *Representative Government in Industry*, 1924; E. J. MILLER, "Workmen's Representation in Industrial Government," *University of Illinois Studies in the Social Sciences*, vol. 10, nos. 3 and 4, 1922; MARY LA DAME, *The Filene Store: A Study of Employees' Relation to Management in a Retail Store*, 1930; W. C. TEAGLE, "Employee Representation and Collective Bargaining," *American Management Association*, 1935.

The general character of these joint councils is about the same. Agreements may be local, district, or national, depending upon the wishes of both parties and the nature of the industry. The majority of trade agreements in this country are local, but these are often made within the broad limits of national agreements. Workers' representatives to joint conferences are usually the regular officials of the union or experienced members who are elected to the bargaining committee. Employers are similarly represented either by themselves or by their appointed delegates. The actual conduct of the conferences resembles the procedure of ordinary legislative bodies and is not unlike the procedure of the nonunion-shop council or joint assembly.

An interesting example of industrial government under unionism is found in the bituminous coal industry in the United States, in which the joint conference plan of negotiating trade agreements had its inception as early as 1898 and is still the established medium of joint control. Interstate joint conferences are held annually in what is known as the central competitive field (Illinois, Indiana, Ohio, and Pennsylvania). Eight miners and eight operators from each of the constituent states represent their respective groups at these conferences, and negotiations often extend over several weeks before a satisfactory working agreement is concluded. All decisions require a unanimous vote. These interstate joint conferences are followed by state joint conferences which deal with local matters. The major burden of work connected with the state joint conference in each case rests upon a scale committee composed of two operators and two miners from each district, but special committees may be appointed for the purpose of drawing up an agreement. Extensive regulations governing employment in the mining industry are thus formulated and put into effect, giving the workers a real voice in the control of those conditions which vitally affect them.

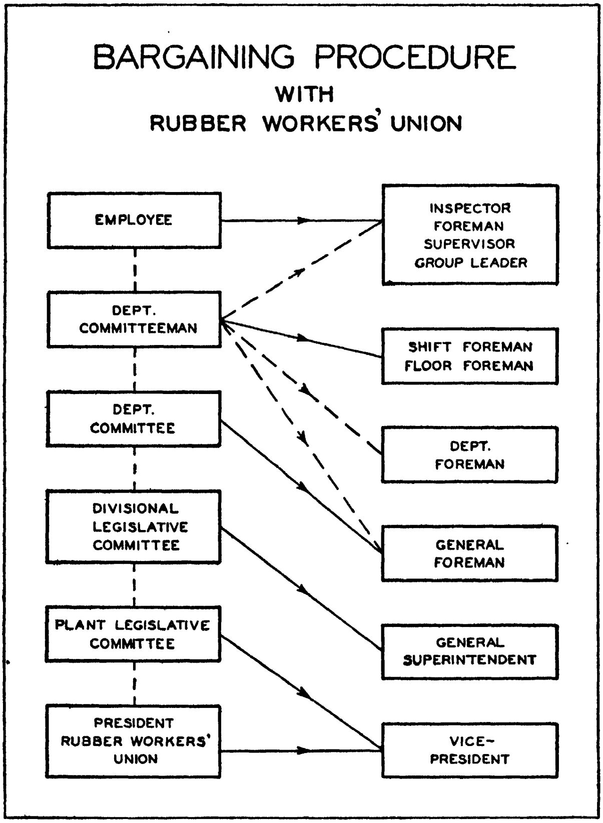
BARGAINING PROCEDURE
WITH
RUBBER WORKERS' UNION
EMPLOYEE
DEPT. COMMITTEEMAN
DEPT. COMMITTEE
DIVISIONAL LEGISLATIVE COMMITTEE
PLANT LEGISLATIVE COMMITTEE
PRESIDENT RUBBER WORKERS' UNION
INSPECTOR
FOREMAN
SUPERVISOR
GROUP LEADER
SHIFT FOREMAN
FLOOR FOREMAN
DEPT. FOREMAN
GENERAL FOREMAN
GENERAL SUPERINTENDENT
VICE-PRESIDENT

FIG. 38.

As legislative bodies enacting laws for the government of the industry, joint councils are authorized to deal with a wide range of problems. Wage scales, hours of work, conditions of employment, recognition of the union and the maintenance of the union shop are naturally the most prominent matters that come before them. Discharge, overtime, distribution of work, apprenticeship, introduction of new machinery, new processes and methods, lost time, holidays, safety rules, and defective work claim considerable attention. Successive steps in the process of handling these problems as they arise between automobile tire manufacturers and various locals of the Rubber Workers' Union are indicated in Fig. 38. Other matters of importance include the status of supervisors in relation to the union, methods of adjusting complaints and grievances, promotion, and the enforcement of state and national labor laws. As the term of an agreement draws to a close, a new joint conference is held for the purpose of negotiating a new instrument incorporating such modifications as seem desirable to both parties.

Interpretation and Application of Trade Agreements.—The Interpretation and enforcement of the provisions of the trade agreement necessitate an established means of communication between the management and the employees in local plants. Experience suggests that this is largely a matter of settling disputes which arise between the local parties to the agreement. Most agreements provide for local joint bodies whose primary function is the adjustment of complaints and disputes and the enforcement of the spirit and letter of the agreement. Methods of achieving these ends vary, but the general procedure is invariably the same. Usually, there is in each shop a representative of the union who is authorized to take up complaints with the departmental supervisor or some other official representative of the management. The local union representative may, however, report all complaints and disputes to the regular business agent of the union, who, in turn, meets with the representative of the company for the purpose of effecting a mutually satisfactory adjustment. It is generally provided that there may be appeal to a joint committee on disputes, and frequently there is final resort to impartial arbitration.

A notable illustration of judicial procedure in adjusting differences and enforcing the provisions of a trade agreement is found in the machinery established under the working agreements between the Waterfront Employers' Association of the Pacific and the Maritime Federation of the Pacific. The first agreement was entered into at the termination of the general strike in San Francisco in 1934. With the exception of the 99-day break which came during the latter part of 1936 and the early part of 1937, this agreement has been renewed annually with minor changes. Seven of the maritime federations, headed by the West Coast International Longshoremen's and Warehousemen's Union, are parties to the working contract with the shipping operators, and the conditions under which over 80,000 men work are thereby established.

In general, these working agreements are the result of a series of negotiations between representatives of seven labor unions[1] and those of the shipowners and operators. The agreements entered into at the end of the maritime strike of 1937 established wages (both for regular and overtime work) and penalty rates for working certain types of cargo; defined shifts, hours of labor, specific duties, working conditions, safety rules and devices; and covered all types of activities in conjunction with the work involved in loading and unloading, sailing and maintaining of vessels while in port or on open sea.

In order to provide for smooth and amicable relations between workers and their employers, the agreements further provided a definite course of action in gaining proper settlement of disputes. Any complaint from either employer or employee charging violation of the working agreement first was called to the attention of the local employee or employer representatives. This meant, for example, that in a dispute over the size of a sling load in the unloading of a certain cargo, the difficulty was taken up immediately between the ship's captain and the union organizer or business agent, who attempted to iron out the difficulty "on the spot." Failing here, regular work proceeded so long as conditions were not "inimical to the health and safety" of the workmen themselves, and the issue was placed in the hands of a local labor relations committee, one of which was organized for each port on the Pacific Coast. This committee was usually made up of six persons—three appointed by the shipowners, and three appointed by the International Longshoremen's Association. The committee met for regularly scheduled weekly conferences but in emergency cases was subject to convention upon 24-hour notice. If the issue in question was not settled without delay by this committee, the working agreement provided for arbitration either under an impartial arbitrator mutually agreed upon by members of the labor relations committee or appointed by the United States Secretary of Labor. The award of the arbitrator, rendered after full hearings and investigations, was final and binding upon both parties.

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[1] The unions are the International Longshoremen's and Warehousemen's Union, Sailors' Union of the Pacific, Pacific Coast Marine Firemen, Oilers, Watertenders and Wipers Association, National Organization of Masters, Mates and Pilots of America, Marine Cooks and Stewards Association of the Pacific Coast, National Marine Engineers' Beneficial Association (Pacific Coast Division), and the International Union of Radio Operators.

Although many trade agreements, like that covering the West-Coast maritime industry, provide for arbitration by an impartial arbiter or tribunal, the tendency is to use every possible means in adjusting grievances before they develop into major issues necessitating arbitration. In this regard, the shop committees, works councils, or business agents perform a valuable service. They assure early hearing and immediate attempts at adjustment. Because these committees or representatives are usually given rather broad powers of interpretation and execution of trade agreements, they constitute an important unit in the scheme of union-management cooperation and industrial peace.

Typical Collective Labor Agreements.—The collective labor agreement is illustrated by that which has obtained between the American Federation of Hosiery Workers and the Full-Fashioned Hosiery Manufacturers of America annually since 1929.[1] The 1936–1937 agreement covered the union employees in thirty-eight mills, most of which are located in the Philadelphia area. One part of the agreement establishes employment, discharge, and union-dues procedure for all union employees. This contract provides that the union shall supply all new workers to each member company within 48 hours of request, establishes the basis of discharge as good faith and without union discrimination, and extends the "checkoff system," under which the employer is assigned the duty of deducting from all wages the amount due the union and making payment each pay day to the designated representative of the union. Another section relates to disputes and grievances, and prohibits strikes, lockouts, and "demonstrations, displays or advertisements tending to excite sympathy or protests concerning the relations or matters in dispute between the contracting parties."[2] Where grievances or disputes arise within the employment of any company member, the collective agreement establishes recourse to an impartial arbitration chairman. The only time strikes or lockouts are sanctioned is when the arbitration award is not lived up to within a twenty-day period after it has been rendered. A union scale of rates is established which is uniform for all companies that are parties to the agreement.

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[1] United States Bureau of Labor Statistics, *Monthly Labor Review*, vol. 43, no. 3, September, 1936, p. 560.

[2] *Ibid.*, p. 563.

Another typical trade agreement exists in the oil industry. In this industry, some 75,000 oil workers were laboring under collective contracts at the beginning of 1937.[1] Most of these agreements have been negotiated upon a local scale. The Sinclair contract, however, is unique in that it is a company agreement negotiated on a national rather than a local basis. This agreement establishes both service and department seniority. Entrance to the employ of the company is generally through the labor or yard department, from which workers are transferred to higher classifications in the specialized departments of the organization. Wage rates are based upon a scientific job-classification system. Under the agreement, it is the duty of union plant committees to work out classification definitions which are submitted to the company through the union's national headquarters. Extra-wage provisions are also made for overtime and holiday work. Hours of labor are not to exceed 40 during any one week, or 72 during any 2-week period. Maximum daily hours are also set in the agreement, as are stipulations relative to vacations with pay, layoffs, and leaves of absence. Strikes and lockouts are prohibited during the life of the contract, and orderly methods for dealing with disputes and grievances are provided. Questions relating to the interpretation of the working agreement are negotiated directly between the management and the national office of the union. All other difficulties or complaints are taken up first by the employee with his foreman or supervisor. The difficulty then passes on to a plant committee selected "from, among, and by" the company's employees. It will be noted that this latter provision excludes the services of all outside union business agents and organizers.

If the grievance is thought by the plant committee to have merit, the matter is referred directly to the plant superintendent for decision within a 10-day period. When the superintendent's decision is not satisfactory to the committee, the difficulty is passed on to the union national headquarters where it is negotiated between national union officials and the executive committee of the Sinclair Company. If pressed still further, the issue is then placed in the hands of the American Federation of Labor which negotiates with the chairman of the Company's executive committee for settlement, or calls for arbitration. Other provisions have reference to questions of employment preference, general checkoff, notices of discharge and layoff, physical examinations, and sickness absences.

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[1] *Ibid.*, vol. 44, no. 2, February, 1937, p. 419.

Individual Union-management Agreements.—In many cases, individual union, rather than general collective labor agreements are entered into between employer and union (or union employees) which modify considerably the normal personnel functions of an organization. One important union-management agreement is that first drawn up between the United Textile Workers of America and the Naumkeag Steam Cotton Company, of Salem, Mass., weavers of Pequot sheets. These parties adopted a union-management cooperation agreement in April, 1927, approximately 2 years prior to the management's proposal to introduce the stretch-out system calling for an increase in the number of looms or spinning frames assigned to each worker. The chief aim of this agreement was to remove as far as possible "all causes for misunderstanding and friction" and to promote "to the greatest possible degree the mutual helpfulness of the two organizations."[1]

To this end, an individual agreement was entered into between the company management and the textile union. Under the terms of this contract, the management recognized the union and pledged to cooperate with its members. In return, the union promised to promote the good name of the company's nationally advertised products and to cooperate "in effecting such economies in manufacturing as may be brought about by the introduction of improved machinery."[2] It was also agreed that in cases of differences arising relative to the "details of operation, compensation, hours of labor, working conditions, or any other matter of controversy between the management and the employees, a period of not less than sixty days shall be allowed for the proper and orderly holding of conference between the management and the executive, or other committee of the union." Both parties to the agreement understood that no action would be taken during this period; and, in case of an unauthorized strike, the union would do anything within its power to maintain continuous operation in the company's mills. In return for this pledge of action, the management agreed to maintain fair wages, good working conditions, and a stable employment during the life of the agreement, which was to run for 1 year at a time, subject to renewal from year to year.

It was not very long, however, until the "idea that weavers could attend astonishingly greater numbers of automatic looms than had hitherto been supposed" swept over the textile industry, simultaneously with increasing pressures for economy brought on by the depression. The stretch-out system was underway. Early in the depression the union accepted the proposal of a "joint research" program involving technological studies and job analyses in the Pequot mills relative to the extent of stretch-out possibilities and the effect of this "extended" labor upon the workers. Soon wage reductions were ordered, and after 2 years of joint research, extended labor through the stretch-out, and depression curtailment of production, things went from bad to worse, until the management made one last call for cooperation before the workers at a mass meeting called in the community hall. The workers were told there were only a limited number of alternatives: research on more work; a drastic cut in wages; termination of the agreement; or an indefinite shutdown. This prospect inflamed the workers, and the following day 981 out of the 1,163 workers casting ballots voted for a strike. The union officials responsible for the working agreement did everything within their power to hold the workers to the contract which was still in force. But on May 8, 1933, every manual laborer, by common consent, refused to enter the mill, and the strike was on in spite of the fact it was declared illegal by the officials of the United Textile Workers' Union. "For the first time since the recognition of the Union, fifteen years earlier, the Pequot Mills were closed because of labor trouble. Under the strain of labor extension and depression union-management cooperation had collapsed, and with it union organization."[1] It is difficult to say how this arrangement might have continued in view of technological improvements had it not been for the depression. Surely the strain would not have been nearly so great.

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[1] NYMAN, R. C., *Union-Management Cooperation in the "Stretch Out,"* p. 185.

[2] *Ibid.*

The United States Steel Corporation is the largest single corporation whose industrial relations are guided in many respects by a union agreement. Early in the spring of 1937, a working contract between the Amalgamated Association of Iron, Steel, and Tin Workers and the Carnegie-Illinois Steel Corporation, largest of the subsidiaries of United States Steel, was consummated. This agreement, also signed by other subsidiary organizations, recognizes the union as the bargaining agent for its members and prohibits discrimination and coercion for union activity.[2] The union has agreed not to coerce workers into joining its organization and not to solicit membership on company time or property.[3] Other provisions

[1] *Ibid.*, p. 143.

[2] *Monthly Labor Review*, vol. 44, no. 5, May, 1937, p. 1237.

[3] *Ibid.*

relating to working conditions include establishment of the 8-hour day and 40-hour week; time and one-half for overtime; 1 week's vacation with pay to all union workers with 5 years' service record or more; a wage increase of 10 cents per hour in all hourly rates, with proportional increases for tonnage and piece rates; provision for local adjustment of inequalities in individual rates; and the recognition of seniority rights in matters of promotion, layoff, and reemployment.

This agreement further sets up procedures for handling complaints relating to grievances and differences of interpretation of the contract. No stoppage of work is to be permitted, and every effort is to be expended in the peaceful settlement of complaints and disputes. In cases of individual complaints a definite procedure is established. First, the aggrieved union member consults his foreman; then the matter is turned over to the shop committee and this body takes up the difficulty with the shop foreman and departmental manager, and if necessary, with the plant manager. If settlement has not been gained by this action, the matter is then taken up by the national officials of the union with the corporation executives, and, lastly, it is passed before an impartial arbitrator whose decision is final and binding. In discipline cases involving discharge, a limit for action of 5 days has been agreed upon, with back pay given where reinstatement is jointly decided upon. The shop committees provided for are composed of from three to ten members, depending upon the departments concerned, and members are allowed time off without pay for committee work. The agreement is subject to renewal or modification at regularly scheduled intervals of 1 year.

CHAPTER XXXIV

RECENT LEGISLATION AND COLLECTIVE BARGAINING

Practices Leading to Governmental Regulation.—The many problems relating to wages and working conditions have been, as we have seen, a prolific source of strife between employer and employee ever since the earliest days of labor relations. In the course of the development of the movement toward union-management cooperation, the issue of the laborer's right to organize and bargain collectively without intimidation or discrimination has become an increasingly important factor in industrial peace and warfare. In this struggle for recognition, the employer has been charged with three major offenses: the blacklist, espionage, and discrimination against the organized worker.

1. The traditional labor *blacklist* usually consisted of a list of names of former employees established by a group of employers in an industry. The names appearing on the list were either those of employees discharged for some cause or those who had gone out on strike against one of the companies. The modern blacklist system, however, is more subtle than the simple procedure of compiling a list which might involve subpoena and publication.[1] It is usually a system whereby employers—often through their personnel or employment offices—make inquiries about specific employees or applicants "through a clearing house or by direct communication with previous employers." Abundant testimony has been given before recent Board and Senate hearings showing that information thus secured has often led to the "rejection of applicants, or the discharge of employees whose previous records show union activity." It is generally admitted that such practice promotes dissatisfaction and unrest among workers, and in many cases has been directly responsible for violent and destructive conflict. Every progressive and far-sighted personnel policy will guard zealously against this type of practice.

2. Amazing testimony has also recently been made public concerning the practice of *espionage* within leading American firms.

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[1] National Labor Relations Board, *Governmental Protection of Labor's Right to Organize*. 1936, p. 13.

This practice involves the retaining of so-called "detective" agencies to supply what are known as "undercover men," who work in the plants or offices as though they were ordinary workers, mingle with the workers, report upon the activities of both individuals and groups and advise the employer of any attempts to bring about organization.[1]

Thus, the chief purpose of espionage is to supply information for blacklisting and to record the day-to-day developments toward unionization taking place among the employees within an organization. Over 200 detective agencies affording labor-espionage service were operating throughout the United States in 1936, and an estimated army of 40,000 to 50,000 individuals were reported to be serving as labor spies in management's desperate attempt to break down labor unionization.[2] According to testimony given before the Senate Committee on violation of free speech and rights of labor, "The higher-paid men, those who . . . come up in the business, are those who make it a profession and not infrequently are found to be recruited from criminal classes. They have been in various forms of crime and they return to it; that is, a number of experts have criminal records."[3]

The president of one large rubber company testified that, during 1936, he authorized a total expenditure of $15,703.49 for the purchase of gas and munitions for his company[4] and that these supplies were delivered to the sheriff and police forces during a strike of the employees.[5] In another company, the chief executive received daily reports from a hired labor spy who was put in the shop as a regular employee and who took such an active part in the organization of a company union that he was elected an officer of the union and served in that capacity until certain other employees became suspicious of his sincerity. One night his room was broken into, and half completed typewritten notes reporting the day's union activities in the plant were found. Early the following morning the man's body was discovered in a back alley near the plant. Senate investigation disclosed that during the period from January, 1934 to July, 1936, inclusive, General Motors Corporation actually expended a total of $994,855.68 for detective-agency services.[6]

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[1] National Labor Relations Board, *op. cit.*, p. 14; see also its *Preliminary Report*, no. 46, Feb. 8, 1937.

[2] *Ibid.*, p. 15.

[3] *Ibid.*

[4] Committee on Education and Labor, *Senate Resolution* 266, Part 8, p. 2950.

[5] *Ibid.*, p. 2951.

[6] *Ibid.*, p. 2175.

The labor relations and subsidiary personnel directors were usually placed in charge of detective-agency service for the corporation. When these services were assumed, "the personnel division directors were the ones who made arrangements and were put in charge of the contacts between the agency and the executive offices."[1] Of the total amount, $419,850.10 was paid to one of the leading detective agencies of the country, but no less than twenty others shared in the aggregate expenditures of the company.[2]

Another large automobile manufacturer (the Chrysler Corporation) paid a total of $275,536.90 from Jan. 1, 1933, through the first 10 months of 1936 to one company alone. This agency was employed to aid the management in the elimination of waste time and materials; the maintenance of harmonious relations between management and employees by "the furnishing of accurate and analytical information on conditions, situations, and supervision that might, in any way, interfere with harmonious relations and the continuous productivity of the client's plant; and, finally, the compilation of general information on the trend of labor developments in the nation, industry, or community."[3] This expenditure, however, was made in addition to the maintenance of a rather complete personnel department.

3. The third employer labor practice is that of *intimidation and discrimination* against union employees. It is difficult to imagine, in view of modern personnel procedure, that the custom of discharging workers for union activities is still prevalent. But it has been a frequent occurrence. Up until the past year or two, it was followed by some of the nation's leading employers and, even yet, jams the dockets of the National Labor Relations Board. The jurisdiction of this body, as explained below, leaves untouched the employment relations of a vast majority of employers.

The published records of the National Labor Relations Board reveal many ways by which this practice is carried on. The record of one case reads somewhat as follows.[4] Early in 1934, a Detroit manufacturer of truck trailers hired a detective from one of the detective agencies. The detective's assigned duties were "to ferret out the union activities of the men" and to keep the employer

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[1] *Ibid.*, p. 1876.

[2] *Ibid.*, p. 2186.

[3] *Ibid.*, Part 4, p. 1371.

[4] *Decisions and Orders of the National Labor Relations Board*, Government Printing Office, 1936, p. 73.

"informed of what was going on in the company plant." In order to conceal the real duties of this "new employee" and to make him eligible for union membership, the detective was given regular employment in the plant. He joined the union soon thereafter and later was elected its treasurer. All this time, he continued to report regularly each week to the employer, and lists of union employees were passed back to the plant superintendent. With these names in mind, the superintendent went from time to time through the plant and warned employees against union activities. Much suspicion, unrest, and confusion was created among the workers because of these actions.

The employment interviewer was instructed to examine applicants carefully in order to find out about their past union activities and their ideas concerning the labor movement. Completely fortified by the secret information turned in by the detective, the company executives were resolved "to put a stop to all attempts on the part of its factory workers to form an efficient independent bargaining agency." To this end, nine of the active union men were summarily discharged, and three others were threatened with discharge. But the undercover detective who had become a union officer and who had been so active in union activities was not discharged, and the men became suspicious. During this time, the National Labor Relations Act became effective, and later a protest was entered before the regional Labor Relations Board. After a careful investigation, the board, under power vested in it by Congress, ordered the company to cease such practices and to reinstate the seven of the nine discharged men whose discharge had taken place after the act became effective.

Collective Bargaining under the National Labor Relations Act.—There are two major federal statutes which have been designed to check these unfair labor practices of employers. One of these is the National Labor Relations Act of 1935, which, as suggested in Chap. XVI, applies to any employer whose attempts to hinder labor's independent organization tend to burden or obstruct interstate commerce. In general, this law covers only those working within companies (excluding the government and railway services) that are doing business in more than one state. Section 1 of the act announces that it is the policy of the United States to eliminate the causes of certain obstructions to the free flow of interstate and foreign commerce. This is to be accomplished in two ways: *first*, "by encouraging the practice and procedure of collective bargaining," and *second*, "by protecting the exercise by workers of their full freedom of association, self-organization, and designation of representatives of their own choosing."

Section 7 of the act, in the main, follows the principles written into the famous "Section 7(*a*)" of the National Industrial Recovery Act. It declares that "employees shall have the right to self-organization, to form, join, or assist labor organizations, to bargain collectively through representatives of their own choosing, and to engage in concerted activities, for the purpose of collective bargaining or other mutual aid or protection."

Section 8 declares it shall be an unfair labor practice for an employer:

1. To interfere with employees in the exercise of their right of self-organization.
2. To dominate or interfere with, or to contribute financial aid to, employee organizations.
3. To discriminate against a worker because of union organization.
4. To discharge an employee because of testimony presented before the National Labor Relations Board.
5. To refuse to bargain collectively with duly elected employee representatives.

Section 9 outlines the methods of determining collective bargaining through the use of secret ballots. It declares that representatives "selected by the majority of employees in a unit appropriate for such purposes shall be the exclusive representatives of all the employees in such unit" in bargaining for rates of pay, wages, hours of employment, and other working conditions, *provided* that any employee or group of employees has the right to present to the employer any grievances at any time.

Section 13 stipulates that "nothing in this Act shall be construed so as to interfere with or impede or diminish in any way the right to strike." Other sections of the act establish a National Labor Relations Board of three members with broad powers to conduct hearings and investigations, to issue "cease and desist" orders, to inflict penalty for refusal to obey court orders, and to staff local and regional offices of the board.

In this way, the Congress of the United States has attempted to protect certain laborers against the abusive practices of blacklists, espionage, and discrimination as illustrated by the cases described above. Already, several states have enacted "little labor relations laws," which promise to affect all employers and employees in intrastate business in a way quite similar to that in which all interstate businesses (except shipping, railroading, and government service) are now influenced by the National Labor Relations Act.[1] In the course of time, many other states will doubtless pass this type of legislation and, in so doing, will increase still further the responsibilities of the personnel departments toward fair and impartial industrial relations.

Chief Weaknesses of the National Labor Relations Act.—While the general objectives of the National Labor Relations Act are commendable, the first 3 years of the application of the law have revealed serious defects. In basic philosophy, the act attempts to "eliminate the causes of certain obstructions to the free flow of interstate and foreign commerce" by assuring workers of their freedom to organize and bargain collectively without fear of discrimination or intimidation. Yet, as one reviews the field of industrial unrest and observes the growing antagonisms that have arisen since the law became effective, one cannot help wondering if the act has not been responsible for an *increase* rather than a *decrease* in conflicts between employer and employee groups, or within the ranks of labor itself. No positive statistical evidence is yet available to demonstrate to what extent the law in its present application is actually defeating the very purpose for which it was formulated. But an intimate knowledge of the circumstances surrounding the many individual cases of conflict leading to strikes or lockouts raises serious doubts as to its practical value.

Most critics of the act point toward defects not of theory but of administration. Some maintain that the board has been clothed with too many judicial powers in its application of the law. There is constant danger of a combination of executive, legislative, and judicial powers working to the detriment of the various parties concerned. Especially is this danger imminent when these powers fall into the hands of an untrained and inexperienced personnel. In the minds of many of its foes, so far, this is what has happened to the National Labor Relations Board. But of even greater concern to those who object to the law in its present form is the lack of confidence in the impartial and unbiased administration of the law in hundreds of cases.

Furthermore, the act as originally passed is vague as to the precise meaning of such terms as "interstate commerce" and "majority" representation. When is an employer engaged in interstate commerce; when all of his goods travel from his plant across state boundaries? When only 5 or 10 per cent of them enter the flow of interstate commerce? Is he subject to the law during certain phases of the business cycle or seasons of the year when his markets reach far out and into other states, but not subject to it when business is poor and his markets are restricted to only intrastate activity? What constitutes a majority of employees in a unit appropriate for purposes of collective bargaining? Does this mean a majority of all employees on the payroll of the company? On the payroll of one plant or division of the company? Or does it mean a majority of those who vote in an election of the company conducted under the supervision of the National Labor Relations Board? If there are 10,000 employees eligible to vote in an organization coming within the jurisdiction of the board, and if 3,000 ballots are actually cast of which 2,500 are in favor of one representation organization and only 500 for another, it is quite obvious that one organization has received an overwhelming majority of votes among those who voted but is still far from receiving approval from a majority of all who are eligible to vote. This problem in principle always arises, however, in every democratic election because it is seldom the case that a majority of those eligible to vote actually exercise their privilege of casting ballots.

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[1] By Jan. 1, 1938, five states had passed such legislation (see Chap. XVI).

Other criticisms refer to the manner in which hearings are sometimes conducted, the length of time it takes to clear a case through the board (during which time the morale and discipline of the organization are badly damaged), the absence of privilege for the employer to help settle jurisdictional disputes between rival labor organizations by calling for official elections, and the uncertainty of the employer's right to discharge insubordinate or incompetent workers. Thus, while the general objectives of the act, in any impartial evaluation of it, must be adjudged as commendable, certain basic amendments to the law and changes in its administration must be effected if its general purpose is to be protected against self-destruction and eventual repeal.

Employee Bargaining under the Railway Labor Act.—The second federal statue, that of the Railway Labor Act, was in fact a "forerunner" of the National Labor Relations Act, and has done for railway employees of the nation what the National Labor Act has done for other interstate commerce workers.

For the past 50 years or more the federal government has been concerned with the labor relations of railroad companies.[1] The first railway labor act was passed soon after railroad legislation began in 1887. The first comprehensive labor policy law was the Railway Labor Act of 1926, which established adjustment boards for the settlement of disputes arising between carriers and their employees. In 1934, amendments to the 1926 law specifically prohibited any carrier of the country from "using its funds to finance, promote, or maintain a labor organization of its employees."[1] This practically abolished the so-called "company unions" that had been introduced along with elaborate employee-representation plans by many carriers after the government returned the railroads to private owners in 1920. After this change in 1934, some employers effected required amendments by the formation of "system associations" as substitutes for the newly outlawed company unions. System associations, like the former employee-representation plans, "are composed of certain crafts or classes of employees on one railroad system."[2]

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[1] United States Department of Labor, "Collective Bargaining under the Railway Labor Act," *Labor Information Bulletin*, vol. IV, Feburary, 1937, p. 1

Early in 1935 the Railway Labor Act of 1934 was declared unconstitutional by the United States Supreme Court, and hurried minor amendments were enacted into the Railway Labor Act of 1935. The principal change in this legislation brought the air-transport industry and its employees under the scope of the 1935 law. The policy as established in the present statute is that:

> It shall be the duty of all carriers, their officers, agents, and employees to exert every reasonable effort to make and maintain agreements concerning rates of pay, rules, and working conditions, and to settle all disputes, whether arising out of the application of such agreements or otherwise, in order to avoid any interruption to commerce or to the operation of any carrier growing out of any dispute between the carrier and the employees thereof.

This law, somewhat similar to the National Labor Relations Act, has as its major objective the encouragement of harmonious industrial relations within the railway and air-transport industries. To this end, the act provides that "the majority of any craft or class of employees shall have the right to determine who shall be the representative of the craft or class." A National Mediation Board is established, whose duty it is to supervise elections, to facilitate adjustments of disputes, and to proffer its services when direct negotiation is not successful in the settlement of controversies. Any changes of rates of pay, rules, or working conditions are illegal except as done in the manner prescribed in the act or with labor unions. Written working agreements extending usually through the course of a year are voluntarily entered into by employers and employees through their bargaining agencies, and any change in agreement or desire for a new agreement calls for the serving of a written notice which must be duly acknowledged and followed by joint conferences within a given length of time.

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[1] United States Department of Labor, "Extent of Collective Bargaining in the Railroad Industry," *ibid.*, vol. IV, March, 1937, p. 1.

[2] United States Department of Labor, *Labor Information Bulletin*, vol. IV, February, 1937, p. 1.

The process of making and maintaining labor agreements is simple. First, in case any difficulty arises over present working agreements or the effecting of new agreements, direct negotiation between the two parties is required, during which time a serious attempt is to be made by both parties to adjust their differences. Failing this, either or both parties to negotiation may invoke the services of the National Mediation Board. Or, if it deems necessary, the board may offer its own services. In any event, the law requires that during this time the terms of the old contract shall be recognized and employees shall remain at their tasks. Next, if mediation does not prove to be successful, voluntary arbitration may be employed. Under these conditions, a written contract to arbitrate is entered into by the two parties, and the award becomes final and binding upon both parties for 1 year. During the course of arbitration, testimony is taken under oath, and necessary investigations are made.

The final step in collective bargaining is taken when all previous attempts have failed, and involves the presidential appointment of a special "fact-finding board." Until this board has announced its findings, and for 30 days thereafter, the *status quo* must be maintained, following which either party to the controversy is at liberty to take any course of action it desires. But, if any source of difficulty between employer and employee becomes a constant point of irritation, the act establishes the National Railroad Adjustment Board, whose duty it is to deal with the issue, and to restore harmony and cooperation.

The Mediation Board requires that every railroad file a copy of each collective bargaining agreement in its office. As a result of this requirement, 149 class one roads had filed 2,448 agreements covering 1,070,000 employees by July 1, 1936.[1] Of this total number of agreements, national labor unions had filed 1,864 agreements, system associations had filed 487, and local labor unions 97. During the 2-year period prior to June 30, 1936, the National Mediation Board certified representatives in 390 disputes over bargaining privileges between national labor organizations and system associations or unorganized groups involving 115,000 wage earners and conducted 273 secret elections to determine which agency should be the bargaining representative of the laborers. Several times during 1937, as in other years, the act was instrumental in checking the spread of strikes, one of the most recent being in connection with the brotherhoods' demand for a 20 per cent increase in wages, made in August, 1937, and a threatened strike during the autumn of the same year among employees of the Pacific Electric Railway Company.

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[1] United States Department of Labor, *ibid.*, vol. IV, March, 1937, p. 3.

Railway Labor Act in Operation.—Brief reference to the employee representation procedure of the Atchison, Topeka and Santa Fe Railway Company may serve to indicate several of the major features that distinguish plans of interstate carriers from those of companies not engaged in the transportation business between two or more states. Engineers, firemen, conductors, brakemen, switchmen, signal employees, telegraph service workers, and marine service employees are represented in the company by the so-called "standard railroad organizations." The clerical help, station employees, and maintenance of way employees in the shop trades are represented by independent associations common to the Santa Fe System lines. Those employees represented by the standard railroad labor organizations, under the Railway Labor Act, have access to the National Railroad Adjustment Board. For those employees represented by the independent associations, there is a System Adjustment Board, established by the provisions of the Railway Labor Act, to which disputes are submitted for adjudication. On all of the System Adjustment Boards, as well as on the National Railroad Adjustment Board, the carriers and the employees have equal representation, each of the parties appointing its respective representatives to the boards.

In cases involving the carrier and employees covered by the System Adjustment Board agreements, all disputes developing from the interpretation or application of the agreements governing rates of pay, rules, and working conditions are first handled by the proper company official. Failing to reach an adjustment in this manner, the dispute may be referred to the System Adjustment Board which hears complaints and renders decisions in such cases. In the event a majority of the members of the board are unable to agree upon an award, the board then agrees upon and selects a neutral person, known as a "referee," who sits with the board as an additional member and makes an award or renders a decision. If the members of the board are unable to agree upon the selection of a referee, the National Mediation Board is requested to appoint one.

During the first 18-month period following the inauguration of the National Railroad Adjustment Board in December, 1934, the Santa Fe system obtained decisions from the board on approximately 250 disputes with employees eligible to this representation plan. Nearly all of the cases submitted to this board involved claims made by employees for additional compensation which they felt they were entitled to under the rules embraced in their respective wage agreements, although a few such cases involved request for removal of "demerits" assessed for miscellaneous infringement of rules. There have been two cases where employees who had been dismissed from the company's services were ordered reinstated by the National Railroad Adjustment Board, and in each of these two cases the employees requested pay for lost time. However, the board denied this part of their request.

Other Adjustment Boards.—The network of the industrial relations boards that have been created during the past 5 years in the United States included twenty-two in February, 1935. Among the most important, besides the two boards described above, were those in the automobile, bituminous coal, steel, newspaper, petroleum, shipbuilding, textile, printing, clothing, and certain phases of the maritime industries.[1] Since most of these were the result of the National Recovery Act, few are at present significant in union-management cooperation.

Criticism of Nonunion-representation Plans.—The relative merits of union- and nonunion-shop committee systems are difficult to measure, a fact which is doubtless responsible for the controversy centering about this subject at the present time. Much depends upon the standpoint from which the question is approached. Organized labor has made serious charges against nonunion joint representation plans. It is urged that elections are unfair, representation of the workers is inadequate, democratic organization and control are precluded, expert assistance is denied the employees, committees and councils lack power and authority, the functions of committees are diverted into nonessential channels, and workers' representatives are intimidated.

The relative soundness of many of these arguments has already been suggested. One or two more, however, are worthy of consideration. Representatives of management are invariably better educated and more experienced in conducting joint conferences than are the representatives of the workers. Employee representatives are doubtless timid about expressing themselves freely in joint meetings and they are perhaps indirectly repressed. Even here, however, there is relief through appeal, in cases where employee representatives believe that they have suffered discrimination because of their activities as members of the works council.

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[1] National Labor Relations Board, *op. cit.*, p. 145.

Democratic organization is doubtless lacking in those nonunion committee plans which have no provision for impartial arbitration of disputes. It matters little that the number of representatives is equal, if the representatives of management are able to block all legislation which is distasteful to them and if there is no appeal to an impartial agency. So long as the president of the company or the board of directors retains absolute veto power, the essence of real democracy is lacking. Committees and councils which have advisory powers only do not secure for the workers a democratic organization of the workshop, and little more can be said for those representative bodies which have legislative powers but have no right to carry their decisions beyond the officials of the company.

It is true that employees are usually denied expert advice and assistance by outside agencies, such as the trade union offers through its business agent and other union officials. Certain employers are beginning to realize this and are advocating the appointment of an executive secretary who will be the active business agent of the employees' association in its relations with management. There is also considerable truth in the criticism that nonunion councils frequently deal only with noncontroversial matters, such as welfare services and personnel practices. The real objects of collective bargaining are usually controversial in nature and include such matters as wage rates, hours, conditions of employment, piecework, vacations with pay, overtime, apprenticeship, and holiday work. It must be admitted, however, that while a great number of nonunion employee committees are authorized to handle only welfare services, there is a definite tendency to empower them to deal with the controversial subjects.

Labor leaders sometimes insist that employers do not give to their joint councils accurate information with regard to wages, hours, and conditions in relation to the cost of production. It is urged that inaccurate data are furnished employees concerning overhead expense, surplus, and profits. In the absence of reliable information, sound decisions cannot be made. Criticisms of this nature are, however, difficult to substantiate.

Employee-representation Plans as a Substitute for Unions.—The question as to whether employee associations are an adequate substitute for independent trade unions is a much controverted one and has occasioned considerable discussion among special students of industrial relations. In approaching this discussion, it is well to keep in mind the fundamental difference in the structure of the two types of joint representation. Employee associations and works councils of the nonunion type in America represent an organization of employees within a single plant, or several plants of the same corporation, and have no affiliation with the employees of any other company in the same trade or industry. Labor unions, on the other hand, are organizations of the workers in a craft, trade, or industry and are designed to safeguard and advance the interests of all affiliated employees within these limits. Trade and industrial unions, moreover, federate into interindustrial organizations such as the A. F. of L. or the C. I. O., thus further integrating their forces with the general labor movement throughout the nation and to a certain extent internationally. This distinction is stressed because an intimate relationship obtains between the structure and effective functioning of any organization. Functions are often restricted because of inadequate structure. This is the essential fact behind the weakness of the nonunion-shop council.

From the point of view of the wage earners in any industry, employee-representation systems which are not integrated with independent organizations outside of a single company are deficient in many particulars. Joint conferences are confined to the representatives of management and representatives of employees within a single enterprise or, at most, a group of establishments owned and operated by the same corporation. This invariably means that employees do not have the benefit of expert advice and direction by agents experienced in the art of negotiation. The formulation of agreements governing conditions of employment requires special skill and considerable experience. The employer is free to engage trained and competent counselors to represent him in every phase of his business, not excluding conferences with his employees. It is quite likely to be otherwise with the workers in a nonunion-shop committee system. A careful investigation of one of the oldest and best joint-representation plans in the United States led some years ago to the following conclusion on this point:

> It did, indeed, seem to us that many of the miners' representatives were timid, untrained and ill-prepared to present and argue the grievances of the miners and that their experience as representatives was not developing

> initiative or leadership in them. The representatives themselves were of the same opinion, and so were most of the miners whom we interviewed. . . .
>
> The fact that employees' representatives are ill-prepared to be advocates for the miners was pointed out by a number of men; many of them were uneducated; they had no time to read. What match were they for the educated, experienced executives of the company before whom they must advocate the interests of the men?[1]

This is often the case in present-day schemes. In such a situation, the labor union functions to much better advantage. Integrated into national and international unions, craft and industrial organizations are able to delegate to experienced leaders the important task of negotiating with representatives of the employer. These men are expert in conducting joint conferences and are able to protect the workers' interests when the working agreement is formulated. The "business agent" or "walking delegate" is assigned the job of watching the union's interests in the application of the agreement and, although he often abuses his authority, he is a valuable representative.

Even if the employee association were sufficiently effective in negotiating agreements with the company, it would still lack power to enforce adherence to them. An organization confined to an individual plant or group of plants controlled by the same company is manifestly impotent to deal successfully with a company that refuses to accede to the workers' demands. Under the terms of many representation plans, employees may "act as they see fit" if decisions do not suit them. But it is obviously difficult to act freely where there is no strike fund, no affiliation with strongly organized workers, and no assurance of moral and financial support by outside agencies. Under such circumstances, pressure cannot be brought to bear upon a recalcitrant employer. It is different when a strong labor union exists in the industry. The bargaining power of international trade and industrial unions tends to equal that of the employer and thus establishes the fundamental principles of effective collective bargaining. The leveling up of wages and general improvement in the conditions of employment are economic and social functions of the labor union, and its demands in these particulars are often supported by collective termination of work in case the employer refuses to grant them. Strike funds and material and moral assistance from other unions enable particular organizations to compel acceptance of their demands or at least a reasonable compromise.

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[1] SELEKMAN, B. M., and MARY VAN KLEECK, *Employees' Representation in Coal Mines*, pp. 188, 189.

What of the power of the shop committee to maintain on a level of approximate equality the labor costs of a competitive industry? It is admittedly insignificant. The equalization of labor costs and labor standards throughout the various establishments of a competitive industry is often socially and economically desirable and necessary. Only in this way is it possible to prevent such costs and standards from degenerating to levels produced by cutthroat competition. Wages, hours, and conditions of work soon are reduced to the socially undesirable standards maintained by the marginal or "meanest" employer, unless the workers are organized so effectively as to preclude such a result. National and international unions set the minima below which the employer is not allowed to go in his negotiations with local labor organizations. Adherence to these standards is watched over by the business agent whose job and pay do not depend upon the employers with whom he deals.

There are questions of general interest to the workers which must be handled by organized agencies outside the single company or industry. Wage earners frequently find it necessary to shift from industrial to political action to safeguard their larger interests. Either directly through their own labor party, as in England, or indirectly through the election of their friends and defeat of their enemies in other political parties, as in the United States, workers must secure the enactment of protective legislation. Political action has been responsible for the enactment of laws governing factory conditions, child labor, minimum wages, accident compensation, unemployment insurance, employment exchanges, immigration, hours of labor in hazardous occupations, and union affiliation protection. The employer invariably opposes such progressive measures, but organized labor, aided by friendly social reform agencies, is often able to defeat even the powerful associations of employers. Witness, for example, the changes which began in 1933 in the wake of the depression.

Powerful labor unions, then, can perform functions which the nonunion-shop committees in their present form cannot fulfill or are prevented from executing. The bargaining power of employers and workers is approximately equalized, labor costs in highly competitive industries are standardized, trained and experienced representatives are provided for the workers, conditions of labor are made uniformly reasonable, constituent unions are marshaled effectively on the political field, and mutual benefit services are provided.

The Economic and Social Justification of Employee Representation.—It would be erroneous to assume that because they are relatively less powerful than ordinary labor unions, nonunion employee associations have no place or justification in the present organization of industry. One might even decline to justify the existence of joint councils and yet be compelled to admit that they are probably here to stay. A scientific attitude would, moreover, require that one endeavor to learn whether an institution which has developed so rapidly and succeeded so generally has a legitimate function to perform in the present economic order.

Employers do not oppose labor unions without reasons which, to themselves at least, seem legitimate enough. They object to unions partly because such institutions interfere with individualistic control of industry. Such outside interference is distasteful to the average employer. Negotiation of collective agreements with labor organizations necessitates dealing with outside agents who are totally unfamiliar with the internal problems of the shop and the security of whose positions depends upon their ability to stir up trouble. Too often, they trample at will over the terms of the working agreement, making it worth no more than the paper upon which it is written. Thus argues the employer. Not infrequently, however, employers oppose labor unions because to recognize them would mean the provision of decent standards of wages, hours, and conditions of labor, which would enhance the cost of production. But his penchant for individualistic control of his own enterprise is probably the fact behind the average employer's relentless opposition to independent unionism. The bargaining strength of the union may be too great to suit him, and the machinery of joint control may become too cumbersome and take the adjustment of grievances outside of the establishment.

Many employers are antagonistic to labor unions because of unpleasant experiences with radical or corrupt union leadership or because of the traditional indifference of unions to the requirements of efficient production. To interfere unnecessarily in the internal affairs of the company without a constructive attitude toward better quality and greater quantity production seems inexcusable. It does not occur to the employer, perhaps, that, if unions were assured permanent recognition and the workers were given a just share of the product of industry, a greater interest in economy and efficiency might develop.

Can it be said, then, that the employee association has merits not possessed by the ordinary labor union? From the standpoint of the employer, it assuredly has. It is reasonable to assume that problems of employment relations within an individual plant can be handled more effectively and with better understanding by those immediately concerned than by outside parties. The record of professional business agents of unions in many industries, such as the building trades, is not such as to create confidence either in their intelligence or in their ability to deal tactfully with the employer.

The inability of the employee association to equalize bargaining power is evident. It cannot be denied, however, that where there has been no established means of communication between employer and employees, the creation of a works committee to deal with questions of wages, hours, conditions of labor, and discipline represents a step forward. This is acknowledged by unionists themselves, hence the provision of shop stewards and grievance committees.

The independent association has doubtless proved superior to the labor union in giving to management a clearer conception of the workers' disposition and desires. This is because of the more intimate relationship which an intraplant organization affords. Where the employer has given the works council liberal powers in determining the terms of employment, he has found the attitude, procedure, and judgment of employee representatives remarkably reasonable and constructive. Through the committee, also, employees have come to know the better side of management. This process of education is mutually beneficial and leads to a greater understanding of problems that concern them both. Discussion of company finances, unit costs, economy in production, advertising expense, selling costs, and the relation of the enterprise to the entire industry has given the workers a better conception of management's problems. This may explain why, on the whole, employee associations have taken a deeper interest in problems of production than have labor unions, which in only a few instances have displayed an active interest in such problems. Even where unions have cooperated in production matters, they have functioned best through works committees.

In justifying the existence of employee associations, it must be remembered, moreover, that in many industries trade unions either do not exist or exist in only a small degree. To be sure, the two major labor federations of the country are attempting to remedy this situation. But it is estimated that not more than about 20 per cent of the organizable American wage earners are inside of trade and industrial unions. Under such circumstances, employers who desire to establish some form of collective bargaining must develop their own systems of joint control, even though they may not be averse to dealing with labor unions.

So long as American trade unions are excessively craft-conscious, employers generally find it unnecessary, if not undesirable, to deal with them. This is true for two reasons. It is much easier to defeat a craft union than it is to conquer one that is organized along industrial lines. Then, too, craft consciousness is responsible for craft selfishness, which is so important a cause of endless jurisdictional disputes and conflicts between the various trade unions in a given industry. Herein lies the greatest potential strength of the C. I. O. These petty union quarrels frequently prove costly for the employer, and he finds relief from them in the employees' association.

The independent association, therefore, would seem to be a logical and indispensable agency for creating cordial relations between management and employees in the individual plant, stimulating interest in problems of efficiency and economy within the establishment, and developing loyalty to the company. But it is incapable of dealing with industry-wide problems which are vital to the workers' progress. National and international unions are better equipped to deal with these larger questions. Although employee-representation systems will persist and doubtless prosper in nonunion plants, even under the National Labor Relations Act, some plan for the federation of these committees within an industry will probably be developed, and, perhaps, eventually independent unionism will be greatly recruited from this source. In fact, already steps are being taken in this direction. In Los Angeles, for instance, it was announced in August, 1937, that a new federation composed of employee associations was being formed under the guidance of a new League of Independent Unions. Charter members of the organization included workers in transportation, aircraft, meat packing and rubber industries.

It is difficult to see how employee associations can be a permanent substitute for labor unions. As special students of industrial relations have pointed out repeatedly, the two forms of joint control are essentially supplementary in advancing the important movement for collective bargaining. The local works council must remain as an integral part of industrial administration, whether nonunion or union organizations obtain. In the adjustment of grievances, unions can function most effectively and constructively through the shop committee, and the same is true of unionism's growing interest in the technical problems of industry. The local enterprise will always remain an important unit in industrial organization, and the employees' committee an indispensable part of industrial government.

PART VII

CONCLUSION

CHAPTER XXXV

AN APPRAISAL OF PERSONNEL MANAGEMENT

The survey of policies and practices in the field of personnel management, which the preceding discussion has attempted, reveals convincing evidence of improvement in human engineering in industry, business, and government. Unmistakable progress in the science and art of managing men and women has been registered within the last quarter of a century in the United States of America. Similar tendencies have appeared in other democratic countries. No other country, however, has manifested so deep an interest in the discovery and application of scientific principles and methods of procedure in personnel administration as has our own. Here the technique of placing and maintaining the labor force has commanded the attention and research energies of specialists in management, government, psychology, and labor economics. Employers not only have responded generously to the challenge of the new science of personnel management but have done commendable pioneer work of their own accord through their personnel departments.

There are many, particularly in the ranks of organized labor, who view hypercritically and suspiciously all attempts made by employers to improve human relations by such practices as fall within the purview of this book. Personnel techniques and procedures are deprecated and opposed. Employers who inaugurate comprehensive programs of labor relations are suspected of ulterior motives. Every new practice is attributed to a materialistic desire for profits. This is invariably true, and undoubtedly will continue to be so because, as was frankly recognized at the outset of our study, profit making is the *raison d'être* and the life force of modern capitalism. Other motives sometimes generate new personnel procedures and practices, but ventures in the field of humanization of employment relations are, with relatively few exceptions, undertaken because they are thought to be "good business." Idealistically, nearly everybody would prefer that progressive personnel policies were born of nobler impulses and a deeper sense of economic justice; that better treatment of the wage earner were accorded him as the right of a human being and citizen in a democratic community. These finer motives to economic behavior may ultimately prevail, if not under capitalism, perhaps under a more spiritual and idealistic form of economic organization. Even now signs are not lacking that this broader, more humanitarian conception of employment relations is destined for wider acceptance and application. The hope for humanization of the processes of production, and an equitable division of the product is not a vagary of economic romanticism. The history of modern industrial civilization in the Western world is replete with evidence of a progressive movement toward such an objective.

Realism, however, compels one to recognize that, on the whole, what is done for the workers is done either because it appears profitable or because the organized strength of labor and threatened governmental interference make changes in managerial policies and practices absolutely necessary. In fact, the complaint is often made that too much is being done *for* the workers and not enough is being done *by* them. If the history of labor relations teaches any lesson, it is that self-respecting wage earners grow weary of having things done for them and have a deep-seated desire to do more things for and by themselves. To the average American workman, excessive paternalism is distasteful. This seems a difficult lesson for employers to learn. Those who believe that either benevolent paternalism or unmitigated autocracy will satisfy employees have not learned the most rudimentary lesson about human nature. The intelligent, self-respecting modern wage earner wants justice, not charity; recognition of his personality and his rights, not the patronage of a feudal baron. Consequently, his cooperation, and not his submission, should be sought. Cooperation by consent is much more effective than cooperation through force or fear.

Viewed pragmatically, perhaps it does not matter that the new and more liberal practices in personnel administration are motivated by the acquisitive desire, so long as the results are beneficial to all parties concerned—employers, wage earners, and the community. After all, these manifestations of a more enlightened management of industry and business are probably a transitory stage in the evolution of economic society to a higher and better form of organization, the structure and functions of which are as yet only faintly perceivable. But for the present and for the immediate future, society should welcome any attempt by employers to raise the general standard of human relations in industry and business provided that such efforts are free from duplicity and insincerity. It is well to dream of a utopia, but men and women constantly face the imperative necessity of living in the present. The chances for a better industrial order in the future doubtless depend somewhat upon improvements in the present one. There is an inescapable continuity in economic evolution, as in all forms of evolution. The future is inseparably related to the past and the present. Constructive economic change necessarily rests upon this salient truth. That employers are doing many things to improve the status of the worker cannot be denied. Industrial feudalism is not dead, and industrial autocracy is too much alive in many sections of the United States, but it is not so robust as it once was on this continent.

Personnel management has not achieved a state of perfection. It has established itself in the favor of progressive corporations but its position is not altogether secure. The instruments of selection and placement are not so reliable as they should or can be. Policies and methods for the maintenance of the labor force are still inadequate. Job analysis and man analysis call for more intelligent approaches. Successful coordination of mechanical and human factors is an exceptional achievement to be found only in the most progressive organizations. Employers know little about the scientific determination of wage scales, and economists have thus far been unable to formulate scientific standards for them. The essential characteristics of a just wage and the methods of assuring the payment of such a wage are problems yet unsolved by the experts in economic science. The safety engineer and the industrial psychologist have contributed much to the solution of the health and accident problem, but management has only just begun its great work along these lines. The relation of hours and physical conditions of employment to health, safety, and efficiency is gradually being perceived, but the hours of labor and the environment of the job are far from the most desirable standards.

As yet, the workers have only an insignificant share in the ownership of industry and only a limited voice in its control. Industrial democracy is still largely a phrase on the lips of idealistic employers, reformers, and labor leaders. Neither employers nor employees, perhaps much less the social reformers, fully comprehend the true meaning and implications of democratic control of industry and business. Moreover, it is with great difficulty that they find light, assurance, and guidance in the organization and administration of political institutions. Political democracy, from which industrial democracy draws its inspiration, is still in the experimental stage;

never has it revealed greater deficiencies in domestic and foreign policies than during the past decade.

But the processes of economic and social evolution continue more or less unarrested by the unpredictable and uncontrollable vicissitudes of economic life. The opposition manifested by "economic royalists" to the humanizing and democratizing forces in modern employment relations does not appear to stop the advance of such forces. This is not meant to imply a philosophy of economic fatalism, since progress comes in every department of human life only through the energizing influence of the human will. Rather is it meant to convey the idea that with the expansion of human intelligence through the processes of democratized education the elevation of the standard of life for the mass is inevitable. Unmistakable evidence of this fact is revealed in the rapid increase of progressive social legislation affecting labor relations and the status of the working population, the spread of collective bargaining, and the general acceptance of enlightened personnel policies and practices during the past decade in the United States.

There are many who believe that the scientific method, as that term is generally understood, is not applicable to the field of employment relations. Certainly, personnel science, if it can be called a science, is in an embryonic stage. Yet, the survey presented in the preceding pages indicates that there are basic general principles which, if applied with intelligence and sincerity, invariably conduce to improved human relationships in industry, business, education, and government. Personnel management is nothing more or less than the successful adaptation of these principles and methods to the needs of particular organizations. If it can help to substitute peace for strife, cooperation for antagonism, confidence for mistrust, and justice for injustice, the science of personnel management will have proved its worth as an agency of social progress. In the midst of the development of this new science, it is well to remember that where private industry fails, government eventually enters to assume the responsibility for better relationships and economic welfare.

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